

# PURCHASING

THE NATIONAL MAGAZINE FOR PURCHASING AGENTS • SINCE 1915

TECHNOLOGY DEPT.



E  
•  
R  
•  
S  
T  
E  
T  
T  
I  
N  
I  
U  
S  
J  
R  
•



S  
E  
E  
P  
A  
G  
E  
39

National Defense Is a Problem of Materials

A CONOVER • MAST PUBLICATION

35 CENTS PER COPY

JANUARY 1941

# *Steel-* <sup>Tech.</sup> FIRST LINE OF NATIONAL DEFENSE



## Republic Operates the World's Largest Stainless Steel Finishing Mill—

Ten years ago, Republic operated the world's largest stainless steel finishing plant. Each year it seemed to become smaller as ENDURO Stainless Steel found its way into new products—automobiles, trains, airplanes; chemical, textile and food processing equipment; home appliances and even fine jewelry.

Actually, the plant has been enlarged—now covers five acres of floor space—and much new finishing equipment has been added so that, today, Republic still operates the largest stainless steel finishing plant in the world.

Now, to the huge peace-time need for ENDURO for a wide variety of every-day uses is added the demand of industry working feverishly in the defense of America—

for bomb chutes in planes, galleys in naval craft, floats for flying boats and a host of other uses where high strength and heat- and corrosion-resistance are imperative.

Republic has looked ahead—has expanded all its facilities—and, fortunately for every man and woman interested in preserving our freedom, is able and anxious to help in the crisis that now squarely faces America—with more and better *steel—first line of national defense.*

*The line of steels and steel products manufactured by Republic is so diversified that we have prepared a complete listing in Booklet No. 199.*

*A copy will be sent you upon request.*

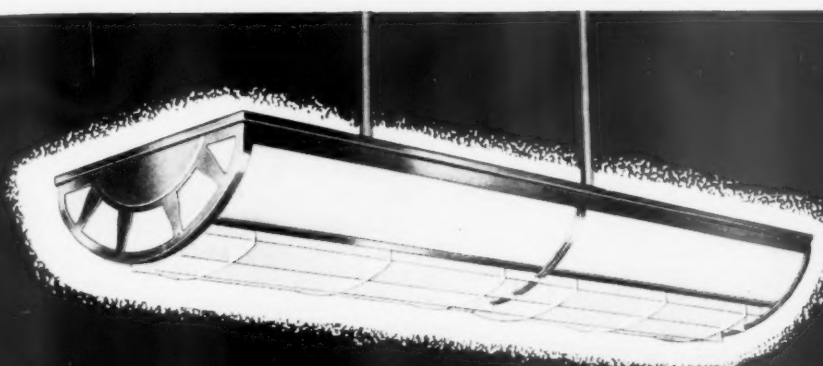

**REPUBLIC STEEL CORPORATION • CLEVELAND, OHIO**  
BERGER MANUFACTURING DIVISION • CULVERT DIVISION • NILES STEEL PRODUCTS DIVISION  
STEEL AND TUBES DIVISION • UNION DRAWN STEEL DIVISION • TRUSCON STEEL COMPANY







# FLUORESCENT UNITS

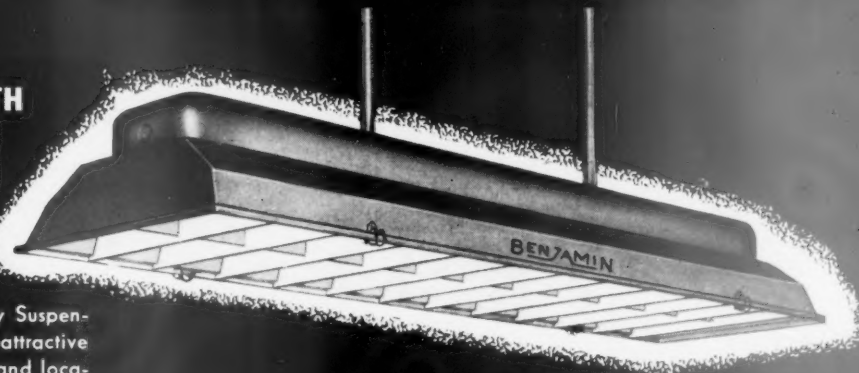



## NOW! A BENJAMIN Engineered Fluorescent Lighting Unit for Store, Office and Other Commercial Use. The New Benjamin FLUR-O-LITE

This new unit marks a new advance in Fluorescent Lighting for commercial use. Outstanding features include: RIBBED GLASS PANELS which directs rays outward increasing the spread of light upon ceiling; DIFFUSING PLASTIC PANELS, which cut down lamp brightness; GREATER ACCESSIBILITY, EXCEPTIONAL EFFICIENCY, OUTSTANDING BEAUTY OF DESIGN. Send coupon for data bulletin.

### BENJAMIN RLM "STREAM-FLO" WITH NEW BENJAMIN LOUVERS AND TWIN STEM CANOPY SUSPENSION

These new louvers improve appearance and provide additional shielding so that lamps are hidden at most angles of vision. They increase shielding angles to 23 degrees on all sides of the reflector, yet due to their careful design, light loss by interference is minimized. The new Canopy Suspension, illustrated with this unit, provides an efficient and attractive means of suspending Benjamin "Stream-Flo's" in offices and locations where improved appearance is desirable.



### BENJAMIN RLM "STREAM-FLO" NOW AVAILABLE FOR BOTH 48" and NEW 60" FLUORESCENT LAMPS

Made of Benjamin lifetime porcelain enamel, the "Stream-Flo" is the most widely used of all industrial fluorescent units for general illumination.

The new Benjamin 60" unit, in addition, to providing higher illumination levels, provides for uniform ceiling lighting.

This new unit has 14 degree shielding angle, reflection factor 79% or more, and light output efficiency of 75% or more. Both the 48" Benjamin "Stream-Flo" and the new 60" "Stream-Flo" are equipped with renewable lamp starters and high power factor auxiliaries which minimize flicker. They carry the RLM Label indicating conformance to all RLM Specifications.





Cut  
Yourself  
Any  
Length

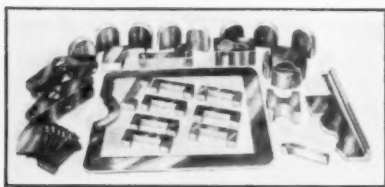
## Do All BAND SAWS

Now in Special Metal Boxes

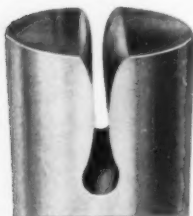
Just what band saw users have been asking for—a modern, compact, convenient way to stock saws. Safe to handle, easy to get at. Window shows how much saw remains in box.

DoAll Saws last twice as long because of their high tensile strength. Originally developed for the DoAll Contour Machine, but most of the widths are also adaptable to metal cutting band saws.

FOR REALLY TOUGH JOBS



A group of special parts made at Ingersoll Milling Machine Co., Rockford, Ill. Tool steel was cut at the rate of  $1\frac{1}{2}$  square inches, cast iron  $3\frac{1}{2}$  square inches per minute. This is typical of the kind of work DoAll Saws do faster and better on all metals, including cold rolled nickel, ductile aluminum alloy, laminated low carbon steel sheets, neoprene, etc.



Vanadium alloy steel part cut at American Brass Co., Detroit, Mich. in  $3\frac{1}{2}$  hours. Diam. 7", cutting height 5". This job would take  $3\frac{1}{2}$  days on a shaper.

### FREE TEST

Send your difficult metal cutting job to our Testing Laboratory for experiment.

FREE—Send for booklet "Actual Performance Records of DoAll Saws."



**THE DOALL COMPANY, Inc.**

1214 Thacker St. Des Plaines, Ill.

Send free booklet on DoAll Saw Performance.

Name \_\_\_\_\_  
Address \_\_\_\_\_

# F.O.B. *Philosophy of buying*

**T**ECHNICALLY, priorities may be reserved as a privilege applying exclusively to government contracts, but the principle can be adapted to everyday business as well. F. O. B. is particularly interested in the following letter, sent by the Sales Vice President of Manning, Maxwell & Moore, Inc., Bridgeport, Conn., to his regular customer list:

"At this time, when orders are so plentiful from so many sources, may I express the thanks of all of us here for the orders that you have given us through the years. Your orders and orders from good customers like yourselves have kept us in business. Without them we could not have survived.

"Permit us to assure you that in this period of difficulties that may be ahead of us, we will give orders from you and our other regular customers prompt and continuous consideration.

"We intend to protect our pleasant relationship with you throughout any emergency that might be ahead of us. We may not be able at all times to make fire-alarm deliveries—but we will be able to deliver our orders from you ahead of orders from new customers to whom we are less deeply obligated.

"We are in better shape than ever in our history to take care of an increase in business. We are organized to take care of our regular business.

"You can help us by placing your orders as far as possible in advance; but whether or not you do, we are set up to protect all the requirements that you may commit to us.

"Please understand that we regard this as a selfish policy in our own interests even more than yours."

**O**RDINARILY, we do not check with the policy that salesmen are best equipped to tell Purchasing Agents how they ought to buy, nor that Purchasing Agents should tell salesmen how they ought to sell. There's plenty of territory within each field to keep the practitioners of each function well occupied with their own responsibilities. But when a ranking P. A. gets confidential with the sales representatives of his own organization and tells them the qualities that impress him as the fundamental requisites

of successful selling, the story is worth listening to. That's what Harry Erlicher did at the General Electric Company some time ago, and the fact that his remarks are still being reprinted in the current business journals, months after the original presentation, indicates that a good many executives find truth and value in his analysis. We are therefore encouraged to reprint a brief summary, for the special benefit of our reception room reader audience among the sales fraternity. Erlicher lists the fifteen requisites of a crack salesman as follows:

*Stick to the subject*

*Know your product*

*Help the buyer*

*Understand product design*

*The customer is not always right*

*Don't gang up*

*Prepare your sales talk in advance*

*Discuss your goods, not yourself*

*Let the buyer make the overtures*

*Don't promise more than you can deliver*

*Be a good loser*

*Stuffed shirts are not wanted*

*Don't bluff about your products*

*Don't outwear your welcome*

*Don't brag about your contacts*

Lev Anderson, P. A. for the Louisville Water Co., is circulating a little memo to salesmen, to the effect that "The ability of your firm to deliver what you have sold is the biggest part of your selling job." The reminder is particularly timely in these days of difficulty in getting deliveries. The principle is fundamental, though often overlooked, that neither the purchase nor the sale is complete until the buyer has possession of the goods.

**S**TANDARD advice for those who have problems in connection with the National Defense program is to write to Washington, where all things can be promptly explained and adjusted. In some bewilderment, therefore, F. O. B. quotes a letter received from the

When writing The DoAll Company, Inc. please mention Purchasing



Defense Advisory Commission in response to such a request for information. Actual names and subject matter are omitted, but otherwise this is a verbatim transcript:

December 7

*Mr. J. has asked me to write you about the present status of .....*

*Mr. L., to whom Mr. B. referred this matter on November 26, has not been in Washington since this date. He is expected back some time next week. Mr. W. is also out of town temporarily.*

*We will keep in touch with you and let you know immediately when anything definite begins to develop down here.*

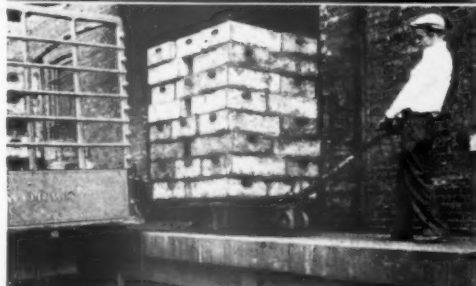
A. C.

In seventeen years of writing on purchasing topics, we have never deluded ourselves with the thought that we have been producing "literature." But an item in Dick Brown's *Southwestern Purchaser* may give us ideas. Dick reveals that Don Hartman of Hollywood, Paramount writer and author of "The Road to Singapore," "Waikiki Wedding," "The Road to Zanzibar," and other sarong sagas of the flickerfilms, is none other than Sam Hartman, former Assistant Purchasing Agent of the Baylor Hospital and Dallas Association member, whose very first published pieces were a series of verses on buying, appearing in the *Purchaser* back in 1923.

ONE thing which is noticeable in the more recent price lists is a widening spread between standard and special items. It begins to look as though the pressure for production under the defense program will prove to be one of the most potent forces for industrial standardization. Manufacturers have long known that the specials—those little variations in quality, design and dimension—are a headache and a luxury, but in the name of Service or of Competitive Necessity they kept turning 'em out as requested and sought their return in goodwill. But times have changed. There are occasions, of course, when the special item is really essential and worth all its extra cost. But if it's not, then the captious designers, engineers and purchasing men are going to turn to industry standards in a hurry.

## BARRETT Lift Trucks

**better than Aspirin for  
Materials Handling Headaches!**



Can your firm handle materials as fast as you can purchase and process them? Many firms can't. Others have broken this "bottleneck" by calling in the Barrett Materials Handling Engineer to get his recommendations on which of the Barrett Lift Trucks were needed to properly see things through.

Barretts have many exclusive construction, operating and safety features. They lift quicker, handle easier—less weight per ton capacity—last longer. Barrett Steepleg Platforms are available in a wide range of types for handling every type of material or product.

End those "M. H. Headaches"—write for free trial offer, Catalog 639, and name of your nearest Barrett Materials Handling Engineer.

Made in models  
from 1,000 to 15,000  
lbs. capacity.



# BARRETT

BARRETT-CRAVENS COMPANY

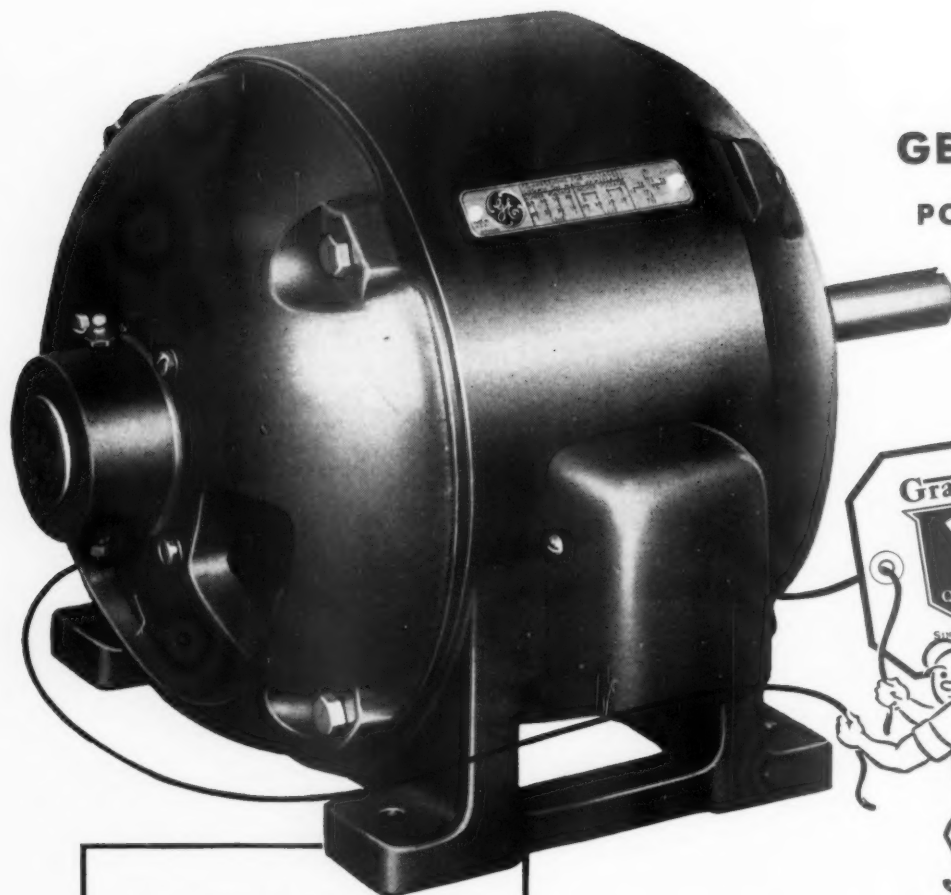
3290 W. 30th Street • Chicago, Illinois

Representatives Everywhere

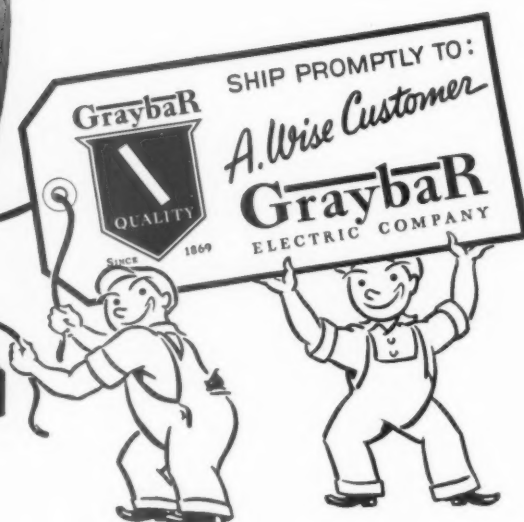


When writing Barrett-Cravens Company please mention Purchasing

# LET GraybaR TAG YOU A **TRI/CLAD!**



## THE NEW GENERAL ELECTRIC POLYPHASE INDUCTION MOTOR



### HERE'S WHAT YOU GET in the new G-E TRI-CLAD

#### 1 EXTRA PROTECTION... against physical damage

The sturdy, cast-iron frame, and end-shields with no openings above the center line, protect the vital parts against physical damage. There's no chance for falling materials or dripping liquids to get inside.

#### 2 EXTRA PROTECTION... against electrical breakdown

The new stator windings of FORMEX\* wire, together with improved insulating materials and methods, give extra protection against electrical breakdown.

#### 3 EXTRA PROTECTION... against operating wear and tear

Fundamental improvements in bearing design give extra protection against failure or excessive wear in service. A scientifically improved lubricating system and double-end ventilation augment this protection.

1, 1½, 2, 3 hp. sizes now available, others soon ready.

\*FORMEX—Reg. U. S. Pat. Off.

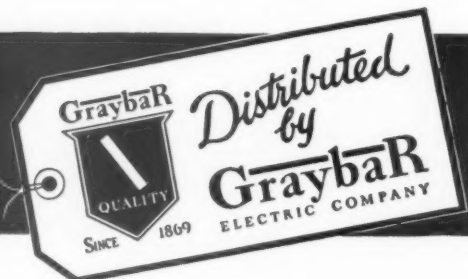
Whenever a basic advance in electrical products is made, you can count on GRAYBAR to be among the first to "tag" the benefits for wise buyers. Such is the case with General Electric's completely new "Tri-Clad" motor...designed to give extra protection three ways, along with higher operating efficiency and sleek, modern styling.

General Electric Motors and Motor Controls are typical of the "front-rank" lines of electrical equipment and supplies offered by GRAYBAR throughout its nationwide distribution network in 86 cities. Yet, in each community, the local GRAYBAR office is pledged to personal service, with individual attention to the needs of near-by buyers.

Thus, there's a double reason for going to GRAYBAR for "everything electrical": (1) The newest and best products, (2) from a "one-call" local source whose primary responsibility is keeping your good-will. Whatever your electrical needs, why not put them up to your local GRAYBAR Representative? Or, write direct for information or assistance.

Executive Offices:  
Graybar Building, N. Y. C.

**GraybaR**  
IN 86 PRINCIPAL CITIES



When writing Graybar Electric Company please mention Purchasing



# PURCHASING

## JANUARY, 1941.....CONTENTS

Preference for Defense Purchases ..... 33

It's Getting Harder to Get Into the Plant ..... 35

Materials in National Defense ..... 39

The Purchasing Agent's Responsibility in 1941 ..... 55

*George A. Renard*

Association Benefits ..... 57

*C. G. Bunnell*

Industrial Supply Shortages Accumulate ..... 58

*Hartley W. Barclay*

The Course of Commodity Markets ..... 61

*H. N. McGill*

Fostering Good Will ..... 100

Priority Ratings ..... 106

Forbes Urges City Printing Plant ..... 109

Alloying Elements Are in Ample Supply ..... 117

### MONTHLY FEATURES

Yours on Request ..... 10, 12, 14, 16

F. O. B. .... 28

Among the Associations ..... 70

Personalities in the News ..... 90

New Products—Ideas ..... 120

Index to Advertisers ..... 140

Published monthly by

CONOVER-MAST PERIODICALS,  
INC.

205 East 42nd Street, New York, N. Y.

HARVEY CONOVER ..President and  
Treasurer

B. P. MAST .....Vice-President

HARTLEY W. BARCLAY ..Secretary

STUART F. HEINRITZ .....Editor

A. M. MORSE, Jr. Business Manager

### Western Manager

Stanley J. Smith,

333 N. Michigan Ave., Chicago

### Advertising Representatives:

Joseph Mehr, 205 East 42nd St.

New York

Richard C. Grove, Leader Building

Cleveland

PURCHASING is an independent journal, not the official organ of any association. It is the only publication of national scope devoted exclusively to the interests and problems of the purchasing executive in industry and government. Established 1915 as "The Purchasing Agent." Consolidated with "The Executive Purchaser."

VOLUME X, NUMBER 1. 35c per copy, \$3.00 per year. Extra postage for Canadian and foreign subscriptions \$1.00 a year. Copyright 1941 by Conover-Mast Periodicals, Inc., in the U.S.A.

## AMERICAN CABLE TRU-LAY *Preformed* Wire Ropes ARE UNIFORM

**UNIFORM IN QUALITY** This is a universally acknowledged characteristic of American Cable's Wire Ropes.

**UNIFORM IN SERVICE** Being uniform in quality, American Cable's Ropes are naturally uniform in service. When American Cable introduced TRU-LAY *Preformed*, in 1924, we gave all industry a rope that far outlasted ordinary non-preformed, our own make included. Here, too, in increased service, there is uniformity for when one TRU-LAY

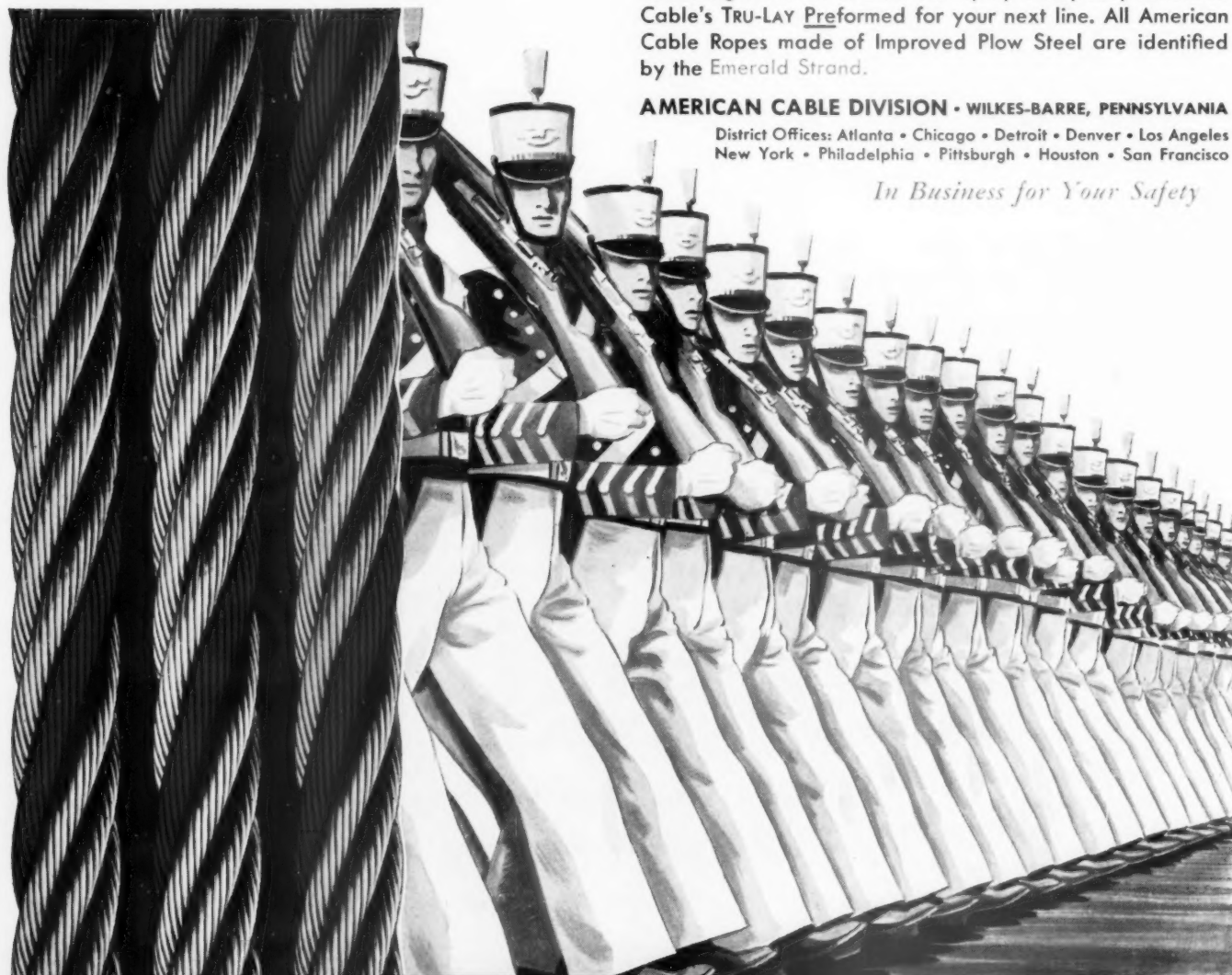
*Preformed* Rope does a job unusually well, the second or twenty-second TRU-LAY Rope will do equally well.

**UNIFORM IN SAFETY** TRU-LAY *Preformed* is a safer rope. Its crown wires lie flat and in place so that there is less danger of their wicking out and jabbing workmen's hands, which often causes blood-poisoning. TRU-LAY handles easier and faster, resists kinking and whipping, spools on drums better and rotates less in sheave grooves. TRU-LAY requires no seizing when cut and will not fly apart. Specify American Cable's TRU-LAY *Preformed* for your next line. All American Cable Ropes made of Improved Plow Steel are identified by the Emerald Strand.

### AMERICAN CABLE DIVISION • WILKES-BARRE, PENNSYLVANIA

District Offices: Atlanta • Chicago • Detroit • Denver • Los Angeles  
New York • Philadelphia • Pittsburgh • Houston • San Francisco

*In Business for Your Safety*



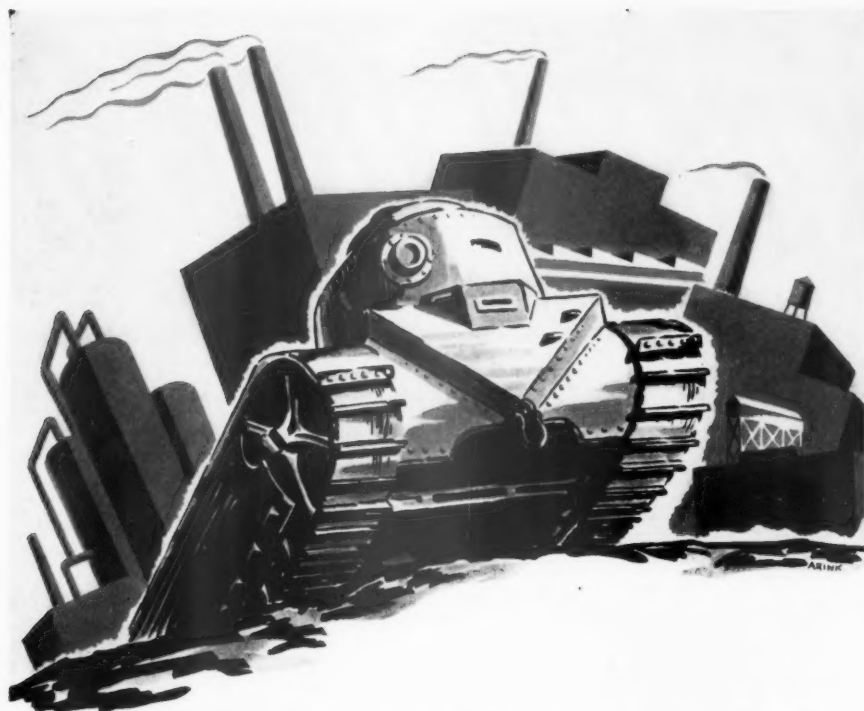
**AMERICAN CHAIN & CABLE COMPANY, Inc.**



**ESSENTIAL PRODUCTS . . .** AMERICAN CABLE Wire Rope, TRU-STOP Emergency Brakes, TRU-LAY Control Cables, AMERICAN Chain, WEED Tire Chains, ACCO Malleable Iron Castings, CAMPBELL Cutting Machines, FORD Hoists and Trolleys, HAZARD Wire Rope, Yacht Rigging, Aircraft Control Cables, MANLEY Auto Service Equipment, OWEN Springs, PAGE Fence, Shaped Wire, Welding Wire, READING-PRATT & CADY Valves, READING Electric Steel Castings, WRIGHT Hoists, Cranes, Presses . . . *In Business for Your Safety*

*When writing American Chain & Cable Company, Inc. please mention Purchasing*





## PREFERENCE FOR DEFENSE PURCHASES

**T**HE present system of priorities on defense contracts, approved by President Roosevelt on December 15th, does not relieve the industrial Purchasing Agent of his responsibility in the procurement of essential materials. Rather, it highlights that responsibility. A high standard of personal performance is still the keynote of the program and will be the determining factor in its success.

Significant items in the application form for a preference rating stress this viewpoint: "What effort has the applicant made to secure the material described? . . . If the applicant has in stock any material listed in item 1, state the amount of such material . . . To what extent can the applicant use a substitute for the material described? . . . Each applicant should try to solve his problem before requesting a preference rating."

Such an analysis plainly indicates that the government expects its suppliers, and their Purchasing Agents, to do the best possible job without leaning on official support and influence. The better job that can be shown in this respect, the less we shall hear about industry "bogging down" on defense work, and the less danger will there be of more stringent controls to take away the initiative and independence of private enterprise.

Meanwhile good purchasing demands that the Purchasing Agent secure the available preference ratings applicable to his contracts for defense materials, and should see to it that his subcontractors and suppliers are similarly fortified, to establish an authoritative position in the schedule of production.

Production is the chief problem at the present time, which puts an added burden on the buyer. Preference ratings will assist in obtaining deliveries on the required date "insofar as this can be done without prejudice to contracts bearing equal or superior ratings, but if necessary, at the expense of other contracts bearing lower or no preference ratings, whether for the Government, private account, or export." In other words, failure to secure a rating may place a given contract at a severe disadvantage on production schedules.

Detailed information and the necessary application forms can be secured from the Administrator of Priorities, Federal Reserve Building, Washington, D. C.

*Stuart F. Weinritz*

# EVERYTHING IN STEEL

Ryerson carries the largest and most complete steel stocks in America . . . carbon steels, alloys, stainless, etc., in every size, shape and form . . . a ready, reliable source of supply.

# CERTIFIED QUALITY

Ryerson Certified uniform high quality Steels meet exacting, narrow range specifications . . . an important advantage—especially with alloy steels where chemical content, heat-treating response and other characteristics must be known with certainty to assure best results in less time.

# IMMEDIATE SHIPMENT

Fast delivery is assured from ten conveniently located Ryerson plants . . . no order too small for prompt, personal attention or too large for immediate shipment.



Joseph T. Ryerson & Son, Inc. Plants at: Chicago, Milwaukee, St. Louis, Cincinnati, Detroit, Buffalo, Cleveland, Boston, Philadelphia, Jersey City.

# RYERSON



# IT'S GETTING HARDER TO GET INTO THE PLANT



By **STUART F. HEINRITZ**

**F**IRST point of contact for the salesman calling on an industrial prospect is the purchasing office. In the vast majority of cases, any legitimate business can be transacted here, between the accredited sales representative of the vendor and the accredited Purchasing Agent of the customer.

There are special instances when it becomes necessary or desirable for the salesman to contact plant or technical executives, or to observe operating conditions in the plant. This situation is recognized in the common-sense approach to the problem. Some of the specific reasons cited are:

- 1—To survey conditions necessary to make an intelligent quotation on material or equipment.
- 2—To secure information not available in the purchasing office.
- 3—On special problems which can not be settled by office discussion.
- 4—For inspection on a report of unsatisfactory materials.
- 5—For installation, service, or instructions regarding the use of supplies purchased.
- 6—At the request of a plant executive for the presence of a representative.
- 7—When the Purchasing Agent feels that the salesman has definite information of value to specific plant men.
- 8—"When something may be achieved by their visit."

In theory, such contacts should be made through the purchasing department. The discretion and decision as to the necessity of admitting salesmen into operating departments is a part of the Purchasing Agent's responsibility. One company makes a practice of scheduling informative tours of the plant especially for the benefit of suppliers' salesmen, and several stress the goodwill value of plant visits and the importance of special courtesy to visitors. But management generally recognizes that the presence of visitors tends to distract plant operations. One of the primary reasons for centralized purchasing and the orderly reception of salesmen in the purchasing office is to permit production men to concentrate on production.

With the informality characteristic of American business that procedure has not always been strictly observed. But there has been evidence for some months



# WORD OF VISITOR'S PASS

on (Print)  
 company  
 as to Bldg:  
 Just of visit  
 Expires  
 Issued by  
 consideration of this application with my request for admission to the  
 consideration of the New Department Division of General Motors Corp. I her-  
 consider of the New Department Division of action whatsoever against said  
 including personal injury or property

VISITOR'S PERMIT  
 GENERAL MILLS, INC.

New Department Division of  
 General Motors Corporation  
 Detroit, Michigan, Connecticut  
 Surrender - as to gate  
 keeper or owner  
 when leaving.  
 No 33025  
 Pass to Bldg:  
 Expires  
 Issued by

Mr.  
 Representing  
 To see Mr.  
 Regarding  
 Date

PASS

GOOD THIS DAY ONLY  
 EXPIRES 3:00 P.M.

VISITOR'S PASS

NO SMOKING  
 IN ANY PART OF OFFICE OR PLANT

Date

Plant Office

Present This Pass at

Issued to

Representing

To See

This pass should be shown upon request and held at the Office of the Plant visited when holder leaves.

BIRD & SON, INC.

Form 12046 AFCA

ENGELW-SANFORD CARPET CO., Inc.  
 Thompsonville, N.C.

VISITORS PASS

GOOD FOR THIS DAY ONLY.

Admit

Date

To the

Depart

KEEP THIS PASS WITH YOU WHILE IN THE MILL  
 It should be surrendered to the Gate Tender on leaving.

ANY PERSON ADMITTING THIS PASS MUST SIGN ALL USE OF THE  
 PASS FROM ANY PLANT IN PLANTING THEREON FOR THE WORKS  
 BETHLEHEM STEEL COMPANY  
 BETHLEHEM PLANT

Admit  
 To  
 Purpose  
 GOOD  
 NOT GOOD AT RIGHT  
 NOT TRANSFERABLE  
 No 432

5897

GUEST

PASS

VOID

5897

GUEST

CARD

VOID

The Forbes Litho. Mfg. Co.

GOOD ONLY ON DAY STATED  
 THIS IS NOT TRANSFERABLE AND MUST BE SURRENDERED ON LEAVING

PASS

Parrel Birmingham  
 Co., Inc.  
 Buffalo, N. Y.

NO. 440 COATESVILLE, PA. 1930  
 The Bower is authorized to pass through  
 works on the above date for the following purposes  
 bearing corresponding number to this pass.

FOR LUKENS STEEL COMPANY

NO. 440 COATESVILLE, PA. 193

LUKENS STEEL COMPANY

In consideration of the issue to me of the pass bearing corresponding  
 number to this application, the undersigned, intending to be legally bound,  
 hereby agrees to assume all risks of and releases Lukens Steel Company, its  
 successors and assigns, from all liability for any personal injury or property  
 damage suffered by the undersigned from any cause whatsoever while on  
 the premises of Lukens Steel Company.

AMERICAN LOCOMOTIVE CO.  
 DIESEL ENGINE DIVISION  
 AUBURN, N. Y.

VISITOR'S PASS

Good Only  
 Admit  
 Nationality  
 Status  
 From  
 To  
 Issued by  
 Counter-signed by  
 Res. Insp. Naval Mfg.

997

THE R. K. LEBLOND MACHINE TOOL CO.

CINCINNATI, OHIO

In return for the privilege of visiting this plant, I hereby release the company owning and  
 operating said plant for myself, my heirs, representatives and assigns, of and from all  
 liability and damages, past, present and future, which may hereafter arise from any injury I may suffer while on the premises of  
 the date.

PERMIT TO ENTER UPON THE PREMISES AND PROPERTY OF  
 SERVEL, INC.  
 AS SHOWN BELOW

HOOD RUBBER CO. Inc.  
 Visitor's Pass

VISITOR'S PASS No 14901

BENJAMIN ELECTRIC MFG. CO.

past, even before the rigid control and supervision  
 made necessary by the defense program, that the theory  
 is rapidly becoming a fact. This observation is sup-  
 ported by a study of procedure in one hundred and  
 forty representative organizations.

## Control Is Tightening

Of the hundred and forty companies reporting,  
 eleven have a definite rule against the admission of  
 salesmen into plant departments, and one has the regu-  
 lation that while regular salesmen covering the account  
 are not permitted in the plant, their sales engineers,  
 metallurgists, and other special representatives of sales  
 departments may be admitted, for reason and with  
 proper authorization. In addition to these, there are  
 five companies which restrict access to certain depart-  
 ments of their operations, and several concerns which  
 are now engaged on defense contracts require the au-  
 thorization of the Army or Navy Department inspector  
 for any visitor to the plant.

Ten companies state that permission to enter the  
 plant is rarely granted, and others indicate that it is  
 held to a minimum. In eight companies, the practice is  
 to call plant executives to the purchasing office or to a  
 conference room rather than sending the salesman into  
 the plant for the interview when such contracts are de-  
 sirable.

While the prevailing policies have been in effect for  
 some time in many companies, twelve report a recent  
 tightening of restrictions, and four of these which  
 have heretofore had no established policy on this point  
 had new regulations in course of preparation at the  
 time of this survey, in mid-December, and presumably  
 these are now in effect.

## Whose Authority?

Permission for the salesman to enter the plant, where  
 that procedure is allowed, must be granted by some  
 responsible official. In sixty-one of the one hundred  
 twenty-eight companies, that permission can be se-  
 cured from the purchasing department only. (One  
 company notes the exception that machinery salesmen  
 are permitted to contact the master mechanic direct.)

In forty-seven other companies, the Purchasing  
 Agent is one of several officials authorized to grant  
 such permission. Within this group are instances that  
 range from (1) only the Vice President in Charge of  
 Purchases and the General Superintendent of Motive  
 Power, in the case of a railroad, to (2) the general





classification of "Executives or Department Heads." A typical example which may be cited by way of illustration is the regulation in effect at the Toledo Scale Mfg. Company:

"Visitors will not be allowed in the factory without a pass authorized by either

- H. D. Bennett (President)
- G. R. Bennett (Vice President)
- L. J. Colenback (Vice President)
- W. A. Fink (Treasurer)
- R. G. Billet (Employment Manager)
- G. M. Richard (Superintendent)
- G. S. Yost (Purchasing Agent)

ALL visitors in the factory must have a pass properly signed."

Such regulations naturally apply to all classes of visitors. It is reasonable to suppose that the majority of salesmen seeking passes, since their normal contact is with the purchasing department, will receive their authorization from this source rather than from some other official. In any case, the study shows that in the 128 companies where salesmen are allowed to enter the plant, permission can be obtained through the purchasing department in 84%, and in 47% this is the *only* channel by which it can be obtained.

In the remaining twenty cases, where such authority is vested in officials outside the purchasing department, the officer most frequently mentioned is the factory manager (works manager, plant manager, and superintendent), who has this responsibility in sixteen companies. Others include the president, production vice president, or general manager (3), engineering department (2), personnel office (2), and foremen (1). It should be noted that in at least two of these cases we have the situation of a purchasing department located in general offices away from the plant itself, or widely scattered plant locations.

The Federal Bureau of Investigation, Washington, D. C., has issued a booklet entitled "Suggestions for Protection of Industrial Facilities." Though it is not designed for general distribution, officials of manufacturing concerns may procure a copy by making an appropriate request to the Bureau. In special cases, the F. B. I. has also made specific recommendations to industrial concerns after making a detailed survey of conditions.





In the majority of cases, non-employees in the plant are required to carry some means of identification and evidence of the proper authorization of their presence. In thirty-five companies this is in the form of a pass card or slip. In forty-eight companies it is a tag of distinctive color and shape, which is attached to the visitor's lapel and is prominently in sight at all times. (A variation of this is a wedge-shaped card inserted in the breast pocket.) Fourteen of the companies use a numbered badge. Three use a photograph of the visitor on pass or badge, and two others are contemplating a change to this more positive means of identification.

It is a common practice to use a color code in connection with the tag or badge system, different colored passes being used for admission to different plant areas or departments or, in larger companies, to distinguish between admission to the offices and operating departments; also to distinguish between passes issued for a single day and those which are valid for a longer period, as in the case of a more extended installation or inspection process. There is also a distinction in some cases between the passes issued to commercial visitors and those used by outside service employees, such as truckmen, etc., whose duties require admittance to the plant premises. The latter are generally issued by the gatemen or protection force, who are personally familiar with visitors of this type. One tag is printed to show five plant zones, and is punched to show exactly where admittance is authorized.

Twenty-eight of the companies use no means of identification for plant visitors, but in twenty-three of these cases it is required that the visitor be accompanied by some responsible employee of the company, and in eleven cases this escort must be a representative of the purchasing department.

The requirement of having some one from the company with the visitor at all times is quite general, even with a pass system in effect. A number of the larger companies are organized with a corps of guides or ushers for this special purpose, sometimes staying with the visitor for the duration of his stay, and in other cases taking him from the office to the department or plant official with whom his errand is concerned, the responsibility from that point on lying with the plant man. Specific regulations on this point are reported as follows:

Guide or usher	11
Some responsible employees	9
Member of the purchasing department	16
Member of purchasing department, or superintendent or engineer	4
Member of purchasing department or of department visited	5
Member of department visited	6
Department head	2
Supervisor	1
Person issuing the pass	1

#### Typical Procedure

The typical procedure in securing admittance to a plant starts with making the application. This may be quite informal, but where any sort of pass system is in effect the minimum requirement will include a statement of the visitor's name, the company he represents, the plant official to be contacted, and the nature of his business. These entries are sometimes made in a register kept for that purpose, sometimes on the stub of a two-part tag, and sometimes on a special application blank. An essential part of the system is a complete record of all plant visitors, which will show for

each individual the frequency and the length of his calls.

Frequently the application includes the signing of a release from any liability resulting from possible injury on the premises. There is a marked tendency for more rigid considerations of the visitor's application and the propriety of allowing him in the plant, particularly in those concerns which are now engaged, even remotely, on national defense business.

If the application is to be granted by the purchasing department, the Purchasing Agent contacts the factory manager and the particular person to be seen, to make the necessary arrangements. The pass is then issued. The simplest system is to have this done by the purchasing department receptionist, upon oral or written order of the Purchasing Agent. Frequently, however, the pass is issued from some other designated source, such as the personnel or employment department, the protection division, the factory manager's office, or the visitors' bureau. These are cited in the order of frequency reported in this survey.

Minimum requirements of information to appear on the pass are (1) visitor's signature, (2) signature of authorizing officer, (3) department or plant area the salesman may visit, and (4) duration of the pass, usually restricted to the day of issue. The passes are generally numbered serially. For purposes of record, and for further identification, the same number appears on the stub which is filed or is entered in the visitors' register or on the application form. Where a badge system is used, the pass may be inserted so as to appear on the face of the badge, or the badge number may be entered on the register.

At the conclusion of the visit, the pass is surrendered, either at the plant entrance or by reporting back to the purchasing department. In either case, the pass and number are reconciled with the file or register, completing the record.

#### Basic Principles

A recital of procedure, as above, might be construed as reflecting general distrust, red-tape entanglements, and an obstructionist attitude. This is not the case. Established procedure is a necessary adjunct to large scale operation, controls and records are essential, routine regulations are not discriminatory. Good management has long recognized the desirability of some such system, and these policies are of long standing in many companies. The present emergency and the national interest in protecting production processes against interruption and possible sabotage have merely added some precautions to make the system foolproof, and have focussed attention on this particular problem in the case of many industries of medium and smaller size where it has heretofore been neglected.

As noted in the opening paragraphs, management recognizes the general desirability of centralizing purchasing responsibility and of centralizing production responsibility, and of permitting each function to operate with a minimum of interruption from the other. It recognizes also the existence of many legitimate reasons for bringing the executives of both branches together with the sales representative for a specific purpose. That process is facilitated by an orderly procedure, to the benefit of the salesman, the plant and the purchasing department. Whenever a useful purpose can be served by admission to the plant, here is the means for accomplishing it through the proper channels, at the same time providing the controls and supervision which are so essential at this period in our national and industrial history.



# MATERIALS in National Defense

## FOREWORD

As we go to press a Presidential executive order is expected to reorganize National Defense production. The editors believe that the personnel and functions of executives in the Materials Division will not be drastically changed.

**NATIONAL DEFENSE** requirements of the War and Navy Departments cover the procurement of hundreds of thousands of articles and the function of the Division of Industrial Materials of the National Defense Advisory Commission is to make sure that the raw materials for the manufacture of these articles are available at the right time and at the right place. Some of the materials which are urgently needed and which are being secured include, for example; metals ranging from antimony to zirconium; high speed tool steels call for tungsten from China; industrial diamonds from South Africa are also essential; specialists on such materials have been retained by this division and have arranged to have a large proportion of these materials ready when they are needed by American Industry.



**EDWARD R. STETTINIUS, JR.**, forty year old member of the National Defense Advisory Commission heads up the Industrial Materials Division. Previously, Mr. Stettinius served the government in the capacity of Liaison officer between the National Recovery Administration and the Industrial Advisory Board of NRA from June to December, 1933. He has also been a member of the Business Advisory Council of the Department of Commerce. He was from 1924-34 Vice President of General Motors Corporation, from 1934-35 Vice Chairman of the Finance Committee of U. S. Steel Corporation, from 1936-38, Chairman of the Finance Committee and a Director of the U. S. Steel Corporation and from 1938, until his resignation to serve as a dollar-a-year-man, Chairman of the Board and a member of the Finance Committee of the U. S. Steel Corporation.



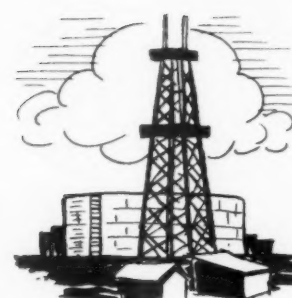
# How the Industrial Materials Division Works



V. 2.



V. 3.



**ACTIVITIES.** The procedure of the Division is first to secure from the Army and Navy a statement of the requirements which usually have to be broken down further in terms of the raw materials. The next step is to check these requirements, whether they be tin, manganese, copper, wool, armor plate, etc., with the available supply. Where scarcity or difficulty of obtaining sufficient quantities to meet the Army and Navy needs is indicated from these statistics, the individual or group in this organization responsible for the particular item undertakes immediately to develop ways and means of building up and maintaining the necessary stock pile or bringing about industrial expansion needed to meet the program.

As an illustration of the procedure which the Division follows, the case may be cited of a recent conference on light armor plate. The principal producers were invited to attend the meeting, which was held jointly with the Army and Navy, and to come prepared with specific information as to their capacities to produce the several key types of armor plate. At the meeting they were advised specifically of what the requirements of the defense program were, and the various problems incident to meeting those requirements were discussed and agreements reached whereby the industry would undertake the necessary expansions. Similar conferences are being conducted in many fields, and unqualified cooperation is being secured.

## STRATEGIC MATERIALS

Aluminum	Manganese, ferrograde	Quicksilver
Antimony	Manila Fiber	Quinine
Chromium	Mica	Rubber
Coconut Shells	Nickel	Silk
Coffee	Opium	Tin
Hides	Optical Glass	Tungsten
Iodine	Quartz Crystal	Wool

## CRITICAL MATERIALS

Abrasives	Hemp	Potash
Alcohol (E. & M.)	Iron and Steel	Refractories
Ammonia	Jute	Scientific Glass
Arsenic	Kapok	Shellac
Asbestos	Lead	Sisal
Cadmium	Magnesium	Sugar
Camphor	Molybdenum	Sulfur & Pyrites
Castor Oil	Nitric Acid	Sulfuric Acid
Chlorine	Nux Vomica	Tanning Materials
Copper	Oakum	Titanium
Copra	Palm Oil	Toluol
Cork	Paper and Pulp	Uranium
Cotton Linters	Petroleum	Vanadium
Cryolite	Phenol	Webbing & Duck
Flaxseed	Phosphate	Wheat
Fluorspar	Picric Acid	Wood Chemicals
Graphite	Platinum	Zinc
Helium		Zirconium



## Executive Staff

W. L. BATT

### Deputy Commissioner

First executive officer under the Commissioner in charge of this section. Installed as division executive in charge of the mining and mineral products but soon selected for this major assignment. It is his responsibility to follow through upon the policies adopted by the Commissioner and his staff and to see that prompt results are obtained.

**BUSINESS EXPERIENCE**—Asst. to Dr. Goss in research work at Purdue University, Hess Bright Mfg. Co., S. K. F. Industries, President since 1933.

**DIRECTORSHIPS** — Air Preheater Corporation, Hudson Insurance Company, Vice President and Director—Swedish Chamber of Commerce of U.S., American Society Mechanical Engineers (Pres. 1936), Society Automotive Engineers.



ROY JACKSON

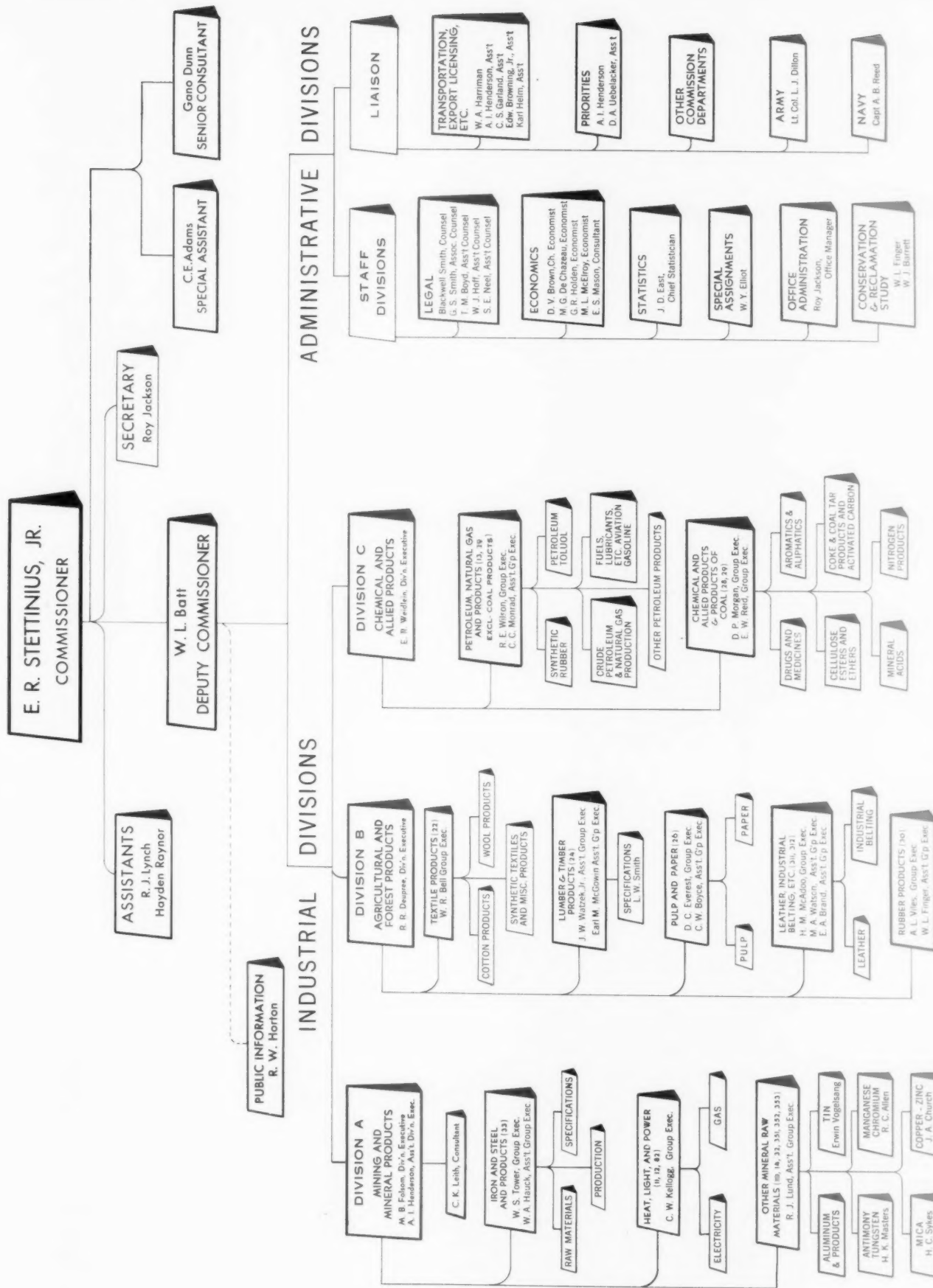
### Executive Secretary

First administrative officer under the Commissioner, Mr. Jackson is responsible for maintaining the schedules of conferences and meetings and prepares the official records of the division. In charge of personnel and office management, in addition, Mr. Jackson keeps the division working smoothly and effectively.

**BUSINESS EXPERIENCE**—Ford Motor Company, Paris, General Motors Export Company, U. S. Steel Export Company.

**PUBLIC SERVICE**—U. S. Navy—1916-1920. Resigned Lieutenant, jg.—1920. Served as Naval Aide to Admiral McCully on American Peace Commission at Paris.

# INDUSTRIAL MATERIALS DEPARTMENT ADVISORY COMMISSION TO COUNCIL OF NATIONAL DEFENSE







## Administrative Divisions Liaison

### W. A. HARRIMAN

#### Chief Liaison Officer

Coordinates activities of the Materials Division with other Divisions of the Commission as well as with Government. Specialist on transportation problems.

**BUSINESS CONNECTIONS**—Partner, Brown Brothers Harriman & Co.; Chairman of Board, Union Pacific Railroad Company; Chairman Executive Committee, Illinois Central Railroad Co.

**PUBLIC SERVICE**—Member, Business Advisory Council for the Department of Commerce.

### A. I. HENDERSON

#### Liaison Officer for Priorities Board and Export Licensing

In addition to other functions, Mr. Henderson is assistant division executive in the mining and mineral products division. Acts as a clearing officer for all division problems concerned with priorities and export licensing.

**EDUCATION**—Harvard A.B. 1913; L.L.B. 1916.

**BUSINESS EXPERIENCE**—Cravath, DeGersdorff, Swaine and Wood.

**PUBLIC SERVICE**—Captain, 7th F.A., First Division A.E.F. (1917-19).



### EDWARD BROWNING, JR.

#### Assistant Liaison Officer in Charge of Export Licensing. Assistant to Mr. Henderson.

Retired from partnership in the firm, George H. McFadden & Brother, in order to accept a position with the Defense Commission.

He had been with this firm since November, 1919.

Members of the firm are world-wide cotton merchants. The firm is oldest in the business and has selling offices in almost every country in the world with head office in Memphis, Tennessee.

Mr. Browning served in the Navy in 1918.



### CAPT. A. B. REED

Acts as representative of the U. S. Navy in this division and is available for consultation with any members of the division concerning any problem related to Navy Material and objectives.

**EDUCATION**—Graduated from Annapolis, 1904; Naval War College 1925-1926.

**EXPERIENCE**—Chairman of the Executive Committee of the Army and Navy Munitions Board at intervals, aggregating five years, 1931-1939; Captain of the Port of Balboa, Panama Canal Zone, 1915-1917; Has had broad engineering experience as well as deck duty in the Navy.



# Staff Divisions



**D. V. BROWN**

## Chief Economist

Data from available sources of information concerning industrial materials inventories, resources and consumption trends are interpreted by Mr. Brown.

**EDUCATION**—A. B. Harvard, 1925, A. M. Harvard, 1926, Ph. D. Harvard, 1932.

**BUSINESS EXPERIENCE**—Harvard College, Harvard Medical School, Mass. Institute of Technology.

**PUBLICATIONS**—"Family Allowances in New South Wales", Q.J.E., 1928 (Joint Author) Economics of the Recovery Program.



**W. Y. ELLIOTT**

## Special Assignments

Confidential investigations on advanced problems.

**EDUCATION**—Graduated from Vanderbilt University (Phi Beta Kappa), attended the Sorbonne in Paris, Ph.D. at Balliol College, Oxford (Rhodes Scholar).

**BUSINESS EXPERIENCE** — Taught at Vanderbilt, University of California and Harvard. Professor of Government and Chairman of the Department since 1931.



**W. J. BARRETT**

## Special Assignments

Developing special reports in individual problems.

**BUSINESS EXPERIENCE**—Manager Policyholders Service Bureau, Group Insurance Division, Metropolitan Life Insurance Company.

**MEMBERSHIPS** — American Management Association.

**PUBLIC SERVICE** — Industrial Advisory Board, N.R.A., Industrial Representative on N. R. A. Compliance Board, Teagle Share the Work Group, Gifford and Wood Unemployment Commissions.

**CHARLES S. GARLAND**

## Staff Officer of Materials Division

Following A.B. degree from Yale University, 1920, he entered Hickman, Williams and Co.

In 1928, he joined Brown Brothers and Co., of New York, a private banking house, and one year later, as manager, he established the Chicago office of the firm. Later a partner in Brown Brothers, Harriman and Co. Since then he has been a partner in Alex. Brown and Sons, Baltimore.



**J. D. EAST**

## Chief Statistician

Studies on individual materials require extensive research and presentation of findings by graphic methods. Mr. East heads the division performing this vital service.

**EDUCATION**—B. Sc. in Engr. —Ohio State University.

**BUSINESS EXPERIENCE**—American Tel. & Tel. Company, New York, Central Hanover Bank, New York, U. S. Steel Corporation, New York.



**D. A. UEBERLACHER**

## Ass't. Liaison Officer for Priorities

With Ford Bacon & Davis, Inc., since 1932. Employed in the Valuation & Report Department, he was engaged in miscellaneous engineering reports and on public utility and industrial valuations. Recently with the New Business Department. Mr. Uebelacker was graduated from Princeton in 1921 with a degree of B.S. and from Harvard Engineering School in 1923 with B.S. in Mechanical Engineering.



**G. R. HOLDEN**

## Ass't. Economist

Specializes in studies of the aluminum industry.

**BUSINESS EXPERIENCE**—Economic Counsel, Eastman Kodak Company.

**PUBLICATIONS** — Various papers in technical journals.

**DIRECTORSHIPS** — Visiting Nurse Association of Rochester.

**MEMBERSHIPS** — American Economic Association.



## Legal Staff, Cont'd.



**GEOFFREY SMITH**

**Associate General Counsel**

Analyzes functional procedure in terms of controlling statutes and Federal Regulations.



**T. M. BOYD**

**Consults with Staff on Confidential Legal Problems**

**BUSINESS EXPERIENCE**—General practice of law in Charlottesville, Virginia.



**SAMUEL E. NEEL**

**Consults on Legal Problems**

**EDUCATION**—A. B. Westminster College (Mo.) 1935, L.L.B. Yale University 1938.

**BUSINESS EXPERIENCE**—Special Attorney, Antitrust Division, Department of Justice, (1938-1940).



**W. J. HOFF**

**Consults on Specialized Problems**

**BUSINESS EXPERIENCE**—Assistant U. S. Attorney, Southern District of N. Y., 1932-33, Assistant Counsel National Recovery Administration 1933-35, Assistant Corporation Counsel, City of N. Y., 1938 to date.

## Mining and Mineral Products



**M. B. FOLSOM**

**Division Executive**

Responsible executive in charge of division A, representing Mining and Mineral Products. Has full responsibility of this division for assuring an adequate supply of basic raw materials for national defense production loads plus normal civilian needs.

**BUSINESS EXPERIENCE**—With Eastman Kodak Co. since 1914, treas. since 1935.

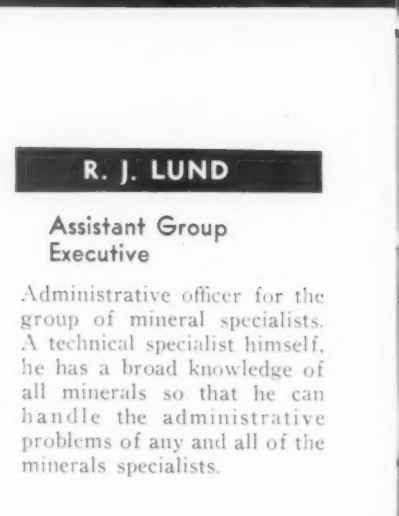


**C. W. KELLOGG**

**Group Executive for Heat Light and Power**

Holds broad responsibility to insure adequate supply of these services on an expanding defense industry.

**BUSINESS EXPERIENCE**—At present President of Edison Electric Institute, Chairman Board & Director, Engineers Public Service Co.



**R. J. LUND**

**Assistant Group Executive**

Administrative officer for the group of mineral specialists. A technical specialist himself, he has a broad knowledge of all minerals so that he can handle the administrative problems of any and all of the minerals specialists.



**C. K. LEITH**

**Technical Consultant**

Supplies specialized scientific and engineering knowledge to the executives, staff and minerals specialists in this division. Coordinates the research and lends to the research results, the practical applications.

**BUSINESS EXPERIENCE**—Mineral advisor to Shipping and War Industries bds., Washington, 1918, to Am. Comm. to Negotiate Peace, Paris, 1919. Chairman The Mineral Inquiry since 1929.



**HEAT, LIGHT AND POWER**





## W. S. TOWER

### Group Executive in Charge of Iron and Steel

As the principal iron and steel specialist, he holds the vital responsibility of bringing before the steel industry the increased needs for the most important commodity in defense requirements.

**BUSINESS EXPERIENCE**—Professor economic geography, U. of Chicago, 1911-17; trade expert U. S. Shipping Bd., 1918-19; with Commission to Negotiate Peace, Paris, 1919; trade advisor Consolidated Steel Corp., New York, 1919-21; commercial attache American Embassy, London, Eng., October 1921 - November 1924; Bethlehem Steel Corp., 1924-33; Exec. Sec. American Iron and Steel Inst. since September 1933; President, American Iron and Steel Inst. May, 1940.



IRON AND STEEL



ANTIMONY—TUNGSTEN

## H. K. MASTERS

### Specialist on Antimony—Tungsten

Completed studies necessary to anticipate reserve stock requirements.

**BUSINESS EXPERIENCE**—U. S. Smelting Company; Central Chile Copper Company (Chile); Charles Hardy, Inc.

## W. A. HAUCK

### Ass't. Group Executive in Iron and Steel

Concerned principally with basic studies of production capacity — demand and specifications.

**BUSINESS EXPERIENCE**— Bethlehem Steel Corporation, Ass't Compt.; Manganese Corporation of America, President and Treasurer; American Iron & Steel Institute, Administration of Iron & Steel Code. In consulting steel business for the last eight months.



IRON AND STEEL

## R. C. ALLEN

### Executive Specialist on Chrome-Manganese and Iron Ore

Responsible for developing ways and means of increasing stocks of these valuable defense materials.

#### DIRECTORSHIPS—

President and Director—Saginaw Dock and Terminal Co., Reserve Mining Company, Lake Superior Iron Ore Association.

Vice President and Director—Brule Smokeless Coal Company; Toledo Lorain and Fairport Dock Company; Oglebay Norton and Company; The Bristol Holding Company. Director—Ferro Engineering Company; Montreal Mining Company; Fortune Lake Mining Company.

## ERWIN VOGELSANG

### Specialist on Tin

One of the key critical materials in the defense program—as this basic ingredient of bronze is completely supervised by Mr. Vogelsang, the continued importation of which could not be guaranteed. Probable result—installation of an American Tin Smelting Plant.

## ROBERT H. RIDGWAY

### Consultant on Chrome

Loaned to the Defense Commission by the U. S. Bureau of Mines because of superior technical knowledge of this strategic material.

**BUSINESS EXPERIENCE** — Bureau of Mines.

## H. C. SYKES

### Specialist on Mica and Graphite

**BUSINESS EXPERIENCE** — Mica Insulator Company; Eugene Munsell and Company; New York Curb Exchange 1931-33; Sharonmuth Corporation of Boston 1920-25.



TIN

CHROME

MICA

CHROME-MANGANESE

# Agricultural and Forest Products



**R. R. DEUPREE**

## Division Executive

Responsible executive in charge of division B, representing agricultural and forest products. Has full responsibility of assuring an adequate supply of basic raw materials in this division for national defense production loads plus normal civilian needs.



**EARL N. MCGOWIN**

## Assistant Group Executive in Lumber

Principally engaged in field work of coordinating the industry.

**BUSINESS EXPERIENCE**—Vice-President, W. T. Smith Lumber Company, Chapman, Alabama.



**W. RAY BELL**

## Specialist in Textiles

Concerned with both cotton and wool problems, he is group executive in charge of textiles.

**BUSINESS EXPERIENCE**—Mr. Bell is President of the Association of Cotton Textile Merchants of New York.

**C. W. BOYCE**

## Assistant Pulp and Paper Group Executive

Collaborates with D. C. Everest on industrial studies.

**BUSINESS EXPERIENCE**—U. S. Forest Service, American Paper and Pulp Association, Vice President, The Northwest Paper Company.

**J. W. WATZEK, JR.**

## Group Executive in Charge of Lumber and Construction Materials

Has developed plans for economical utilization of lumber. One of America's foremost lumbermen.

**BUSINESS EXPERIENCE**—Fordyce Lumber Company, Crossett Western Lumber Company.

**D. C. EVEREST**

## Pulp and Paper Group Executive

His defense problem has been aggravated by the stoppage of imports of pulp from Scandinavia. Has developed studies to assist more complete utilization of domestic sources.



**PULP AND PAPER**



**LUMBER**



**PULP AND PAPER**



**LUMBER**

**L. W. SMITH**

**Specialist on Lumber Specifications**

It is his task to see that the specifications of U. S. Army purchases are broadened to provide a greater use of existing grades and sizes of lumber.

**BUSINESS EXPERIENCE** — National Lumber Manufacturers Association, Chief engineer.



**LEATHER**

**H. M. McADOO**

**Specialist and Group Executive on Leather**

His principal task is to assure delivery of adequate supplies of leather of Army needs.

**BUSINESS EXPERIENCE** — President, U. S. Leather Company, New York. Former - Partner, McAdoo and Allen, Philadelphia, Penna. President, Peabody Leather Company.



**M. A. WATSON**

**Ass't. Group Executive on Leather**

Provides specialized information from the industry to the members of the Commission.

**BUSINESS EXPERIENCE**—Ex. V. Pres. Tanners' Council.

**DIRECTORSHIPS** — Governor, New York Commodity Exchange.

**E. A. BRAND**

**Special Consultant on Leather**

**BUSINESS EXPERIENCE** — 22½ years was executive and attorney for Tanners' Council.

**W. L. FINGER**

**Assistant Rubber Group Executive**

In executive charge of the rubber group. It has fathered the government purchasing of crude rubber for stock piles, has encouraged the construction of synthetic rubber plants and has planned the method and organization for the conservation and reclamation of used rubber products.

**BUSINESS EXPERIENCE** — Rubber Manufacturers Association 1934 to date, Assistant to the General Manager and Chairman of the Tire Division and Rubber Footwear Division.

**A. L. VILES**

**Group Executive in Charge of Rubber**

Has steadily built up reserve stock-piles of rubber.

**BUSINESS EXPERIENCE**—President of Rubber Manufacturers Association, 1935-1939. Represented American Rubber industry on Advisory Panel of International Rubber Regulation Committee.



**LEATHER**



**RUBBER**



# Chemical and Allied Products



**E. R. WEIDLEIN**

## Division Executive

Loaned to the Commission by the Mellon Institute, Dr. Weidlein is in responsible charge of chemical and allied products production.

**BUSINESS EXPERIENCE**—1916-1921 Acting Director, Mellon Institute. 1921 to date—Director of Mellon Institute.

**R. E. WILSON**

## Group Executive for Petroleum and Gas Products

Has faced and solved major problems of the production and storage of high-octane gasoline and increasing the production facilities for synthetic rubber and toluol.

**PRINCIPAL BUSINESS CONNECTIONS**—Standard Oil Company (Indiana) 1933-34, Vice President in charge of Research & Development; Pan American Petroleum & Transport Co. and American Oil Company & Subsidiaries, 1937 to date, President & Director.



**OIL AND GAS**



**OIL AND GAS**

**C. C. MONRAD**

## Assistant Group Executive of Petroleum, Chemical and Grass Products

A petroleum technologist treating with the technical and process phases of petroleum and natural gas activities of the National Defense Commission.

**BUSINESS EXPERIENCE**—1930-37 Research Engineer, Standard Oil Co., (Ind.)

1937 to date Associate Professor Chemical Engineering, Carnegie Inst. of Technology.

**E. W. REID**

## Group Executive on Coal Products

**BUSINESS EXPERIENCE**—At present—Research Chemist, Mellon Institute; European Representative, Union Carbide & Carbon Corp.; Director, Sales Development—Carbide & Carbon Chemical Corp., Senior Industrial Fellow, Mellon Institute. Supt. Chemical Plant, Carbide & Carbon Chem. Corp.



**COAL PRODUCTS**

**D. P. MORGAN**

## Group Executive on Coal Products

**BUSINESS EXPERIENCE**—U. S. Naval Reserve Flying Corps Senior Lieutenant and Flight Commander Northern Bombing Group; Partner Loomis, Stump and Banks, Chemical Engineers; Chemical Consultant, Scudder, Stevens & Clark—At present on leave of absence to serve the Commission.



**COAL PRODUCTS**

# HOW THE INDUSTRIAL MATERIALS DIVISION WORKS

## DUTIES AND RESPONSIBILITIES OF EXECUTIVES IN INDUSTRIAL MATERIALS DEPARTMENT

**OBJECTIVE:** To insure availability of industrial materials at production points in amounts and at time needed.

**SUMMARY OF DUTIES:** To consult and recommend action to industry and government with respect to defense needs and means of their fulfillment. Executives are to keep themselves informed of current and anticipated requirements and conditions and formulate measures to meet problems both current and future.

1 DESCRIPTION OF PROBLEMS AND AREAS OF INFORMATION FOR WHICH EXECUTIVES AND STAFF MEMBERS ARE RESPONSIBLE.	2 EXECUTIVE OR STAFF MEMBER IMMEDIATELY RESPONSIBLE FOR ANALYSIS AND ACTION ON PROBLEMS DESCRIBED IN COLUMN 1.	3 PRIMARY CONSULTATION AND LIAISON AVAILABLE FOR EXECUTIVE OR STAFF MEMBER DESIGNATED IN COLUMN 2.	4 SOURCES OF FACTUAL INFORMATION and SECONDARY CONSULTATION
<b>I. INDUSTRIAL MATERIALS REQUIRED</b> <b>A. Military Requirements</b> 1. Statistical analyses of military needs in terms of items, components, bills of materials, and secondary industrial requirements. 2. Analysis of military specifications in order to reconcile them with qualities and grades to which industry is adapted, and in order to explore possibilities of substitution of less scarce materials. <b>B. Civilian Requirements</b> 1. Exports and imports. 2. Domestic consumption in peak year of post-war. 3. Average domestic consumption for last five years. 4. Qualitative analysis of types of consumers. 5. Substitutes for civilian uses. 6. Methods of distribution, trade practices, etc.	<b>I. A.</b> 1. Economics and Statistics.  2. Group executive.	<b>I. A.</b> 1. Group executive. Bureau of Research and Statistics. Committees of Industry. Committees of Army and Navy. Economics and Statistics. Other Agencies of the Defense Commission.  <b>B.</b> 1. Group executive. Bureau of Research and Statistics. Technical experts. Economics and Statistics. Committees of Industry and Trade Associations. Legal Staff.	<b>I. A.</b> 1. Confidential Memoranda of Army Navy (Bills of Materials, etc.). Military and Civilian engineers. 2. Consultations with technical experts.  <b>B.</b> 1. Published information. 2. Files of Departments and Independent Establishments of Federal Government. 3. Consultations. 4. Questionnaires where absolutely necessary. 5. Federal Trade Commission. 6.
<b>II. SUPPLY OF INDUSTRIAL MATERIALS</b> 1. Inventories and stock piles. 2. Production. 3. Productive capacity. 4. Prices. 5. Study of qualities, grades, etc., of materials available. 6. Research facilities, activities, and prospective developments in the industry. 7. Requirements of Industries Producing Raw Materials. a. Imports of raw materials. b. Domestic production of raw materials. c. Prices of raw materials. d. Labor supply. e. Power. f. Transportation. g. Containers. h. Construction: Materials and labor. i. Capital needs.	<b>II.</b> 1. Group executive, or Economics and Statistics if responsibility is delegated to liaison economist. 2. Ditto. 3. Ditto. 4. Ditto. 5. Group executive. 6. Ditto. 7. Economics and Statistics. Each liaison economist is responsible for communicating to the appropriate agency of the Defense Commission all economic and statistical information on problems affecting that agency. He is required to arrange for work on all such problems demanding any special studies on the part of other agencies, and it is his duty to accept for execution or transmission to Bureau of Research and Statistics or other agency, any analytical or fact-finding assignment on economic problems.	<b>II.</b> 1. Coordinator for Purchase (Priorities). Committees of Industry. Committees of Army and Navy. Economics and Statistics. Legal Staff. The group executive shall keep Research and Statistics informed through the liaison economist of all economic and statistical problems encountered in his section, and of all factual information (in re economics and statistics) collected direct from companies in the industry. 7. Group executive. Committees of Industry. Army-Navy liaison. Bureau of Research and Statistics. Other Liaison executives a. Transportation. b. Export licenses, etc.	<b>II.</b> 1. Bureau of Research and Statistics. Individual companies in the industry. Published statistics and other studies. Unpublished information in Government files. Industry Associations.  7. Companies in the industry, through committees of industry. Trade Associations. Published Studies and Statistics. Unpublished information in Government files.
<b>III. DEFICIENCIES AS BETWEEN TOTAL REQUIREMENTS AND SUPPLIES</b> 1. Analysis in terms of military Program "A" (i.e., appropriations and authorizations to date), assuming various levels of employment. 2. Analysis in terms of Military Program "B" (i.e., a major two-year war effort involving four million men), assuming full employment. Calculations should be made on the basis of dead-line dates specified in appropriations and authorizations, and also on the basis of earlier possible dead-line dates.	<b>III.</b> 1. Group executive.  2. Group executive.	<b>III.</b> 1. Economics and Statistics.  2. Economics and Statistics	<b>III.</b> 1. Studied outlined above under I and II.  2.
<b>IV. METHODS OF MEETING DEFICIENCIES</b> 1. Interim increases of company inventories and government stock piles. a. Imports or full interim utilization of temporarily idle capacity. 2. Increased domestic production. a. Increased rate of production with existing capacity, as by multiple-shift operation. b. Increased scale of secondary recovery (by-products, etc.), and reclamation. c. Expansion of domestic productive capacity. 3. Conservation of industrial materials. a. Revision of trade practices, etc. b. Revision of methods of distribution. c. Use of substitutes. d. Licensing of exports. e. Revision in civilian consumption habits through appeal and regulation. f. Priorities.	<b>IV.</b> 1. Group executive.  2. Group executive.  3.	<b>IV.</b> 1. Coordinator for Purchases. Other agencies of the Defense Commission. Companies in the industry. Departments and Independent Establishments of the Federal Government. Ditto.  3. Ditto. Trade Associations. Committees of Industry.	<b>IV.</b> 1. Coordinator for Purchases. Other agencies of the Defense Commission. Companies in the industry. Departments and Independent Establishments of the Federal Government. Ditto.  3. Ditto. Trade Associations. Committees of Industry.

## Consultants



### GANO DUNN

#### Senior Consultant to the Commissioner

Drafted to contribute senior engineering and production counsel based upon fifty years experience in industry and technical sciences. Recipient of Edison Medal, Hoover Medal, Eggleston Medal and Townsend Harris Medal, Dr. Dunn has been largely instrumental in clarifying problems of power production; which is only one of the major problems upon which he is a consultant.

**BUSINESS EXPERIENCE**—With Crocker-Wheeler Electric Manufacturing Co., 1898-1911; J. G. White & Co., Inc., New York, 1911-13; Pres., J. G. White & Co. 1913 to date; Pres., New York Elec. Society, 1900-02, American Institute Electric Engrs., 1911-12, United Engineering Society, 1913-16; Chairman, The Engineering Foundation, 1915-16; Chairman National Research Council, 1923-28. Member Nitrate Commission of War Dept. 1916.

**DIRECTORSHIPS**—Radio Corp. of America, National Broadcasting Co., R.C.A. Mfg. Co.; Greenwich Savings Bank; Panhandle Eastern Pipe Line Co. Chairman, Nat. Research Council, 1923-28; U.S. delegate and V.P. International Electrical Congress, Turin, 1911. U.S. Delegate and member executive committee, World Power Conf., 1936. A.S.M.E., A.S.C.E., British Inst. of Elec. Engrs.



### C. E. ADAMS

#### Special Assistant and Consultant on Organization and Administrative Problems.

The task of setting up an effective working organization in the Materials Division demanded the services of one of industry's outstanding management executives. Topnotcher in this field, Mr. Adams has been largely responsible for working out and coordinating the details of the functions of this division.

**BUSINESS EXPERIENCE** — Chairman Air Reduction Co., Inc. Chairman of Board, U. S. Industrial Alcohol Co.

**DIRECTORSHIPS**—Air Reduction Co., Inc., U. S. Industrial Alcohol Co., U. S. Industrial Chemicals, Inc., Vanadium Corporation of America, National Distillers Products Co., Bank of New York, Mutual Life Insurance Co. of New York, Pure Carbonic Co., Inc., Cuba Distilling Co., Cuban Air Products Co., and Ohio Chemical and Mfg. Co.



### BLACKWELL SMITH

#### General Counsel

Acts of the executives of this division must conform to a multitude of Federal Statutes, and edicts, administrative regulations and interpretations. Mr. Smith charts the legal course of the division officers and executives in their official activities.

**BUSINESS EXPERIENCE**—Since 1929 practiced in New York City with Wright, Gordon, Zachry & Parlin, member of firm since Sept. 1935. Associated with National Recovery Administration 1933-35, successively as Ass't. General Counsel, Associate Counsel, Acting General Counsel, Ass't. Administrator for Policy, legal advisor to National Industrial Recovery Board, Member of Board and General Counsel.



## ARTHUR KUDNER

### Special Consultant

Problems affecting public understanding and education are constantly recurring as related to materials for national defense. Mr. Kudner was drafted to provide skilled counsel in this respect.

**BUSINESS EXPERIENCE** — President of Arthur Kudner, Inc. since 1935, President of Erwin, Wasey & Co., 1929-35, Writer of Red Cross and Liberty Loan advertisements 1917, received Harvard Award for best written advertisement 1929, member of Business Advisory Council for the Department of Commerce 1939.



## Assistants

### R. J. LYNCH

#### Executive Assistant to Mr. Stettinius

Closest to the inner workings of the Commissioner's office, Mr. Lynch is, without question, in charge of the busiest personnel staff in Washington. As one of the few individuals in the Commission who is intimately familiar with the workings of the recent War Resources Board, Mr. Lynch has been identified with the organizations planning national defense activities since 1939.

During his previous business experience he served in the following capacities:

**BUSINESS EXPERIENCE** — Export Manager of Shaw-Walker Company, Asst. Aviation Mgr. General Motor Export Co., Asst. to Gen. Mgr. General Motor Export Co., Secretary to Chairman, U. S. Steel Corp.



### HAYDEN RAYNOR

#### Assistant

Special and confidential assignments.

**BUSINESS EXPERIENCE** — Wall Street Journal, Irving Trust Company, New York, Guaranty Trust Company of New York, Office of the Chairman, U. S. Steel Corporation.



## SOME ACCOMPLISHMENTS OF THE MATERIALS DIVISION

**I**N VIEW of the possibility that the source of rubber supply from the Malay Peninsula and the East Indies might be cut off, considerable study has been conducted of the rubber supply and the possibility of manufacturing synthetic rubber. A Rubber Reserve Corporation has been created under the RFC, and a buying committee from the industry is building up reserve stock, taking into account the market prices. Synthetic rubber may become an important factor in case crude supplies are cut off. This Division has been studying the synthetic rubber production question and has determined upon tentative arrangements for engineering plant capacity sufficient to test the possibilities of the several processes and also have a small stand-by supply which can be expanded if occasion demands.

**L**ARGE PURCHASES of tin, chrome ore, antimony, tungsten, and graphite have been made, and very material progress has been made in building up stock piles in this country. Negotiations are under way for the building of a tin smelter in this country to safeguard the supply of this essential war material. The stock pile of manganese is being increased, and arrangements are pending with Brazil to increase the supply from that country by rehabilitation of the railroad over which manganese ore is hauled and by giving priority to manganese ore.

**T**HE CREATION of a reserve sufficient to take care of 100 days' supply of the new 100 octane gasoline has been recommended. This fuel yields about 20 per cent greater power than ordinary aviation gasoline. The petroleum industry is now producing very substantially in excess of current consumption, and the recommended reserve is being built up.

**B**ECAUSE of the large quantities of wool required for uniforms and blankets, it is an essential material. Progress has been made in building up the stock pile, and negotiations have been completed for the storing of large quantities of Australian wool in this country in order to have an adequate reserve on hand. In the World War I there was a great deal of difficulty in securing adequate supplies of optical glass for scientific instruments, but present indications are that the needs of the defense program will be fully taken care of. The largest producer in this field is expanding its plant to double capacity.

# THE PURCHASING AGENT'S RESPONSIBILITY IN 1941

By **GEORGE A. RENARD**

Executive Secretary-Treasurer  
National Association of Purchasing Agents

**A**NY way you look at business conditions and management problems for 1941, the purchasing department is in the hot spot and the Purchasing Agent rides the driver's seat on a road which may have many concealed bumps and unexpected detours.

Measuring the efficiency of the purchasing department has been a "high-brow" subject for many years—depression years punctuated with boomlets. The factors separating line from staff functions entered the argument. So did the distinction between service and production divisions and, with the introduction of technical cost accounting formulas to figure profit or loss, it became stratosphere stuff to most of us.

The way things look now, the next several months will put a practical and easy-to-understand measurement into operation: you will get all the materials needed, on time—or you won't. Management and the other functions and divisions of the organization will be more interested in results than in decimal figures. The most welcome report to turn in will be a simple statement saying there have been no delays or shut-downs caused by shortage of materials or failure to secure tools or parts.

## Theory and Practice Check

That sounds like an old-timer blowing off; so, let's about-face. Emphasis on value instead of price also seemed academic when overproduction and surplus stocks were making inventory and turnover records a cinch and hand-to-mouth buying a part of every purchasing agent's religion.

The theory went like this: Price is only one of the elements of value; the others are service, quality and the dependability of the supplier. In order of importance, selection of the best available material to meet the requirement headed the list. Delivery of that selected material, when wanted, placed a close second. Price could edge in third but usually was pushed into fourth place to give the source of supply—faith and confidence in dependability—the show position.

That may have seemed idealistic when the first price quoted was intended to be an introduction and off-quality materials could be rejected and replaced without slowing up the works. What was always sound in theory proves now to be sound in practice as well.

## New Angles

Selection of the best available source of supply has a new meaning when the army and navy have first



call on the best. What is available today may be unobtainable tomorrow, and research will be developing synthetic and substitute materials almost overnight.

Service and delivery factors will also require careful consideration. Materials may be drawn from longer distances and the transportation agencies will not have idle cars, boats and trucks waiting to move instantly on telephone and telegraphic orders.

Dependability in a supplier may even reverse its depression meaning. It may become very important for a supplier to say very frankly that he cannot meet your specification on quality or delivery. The



most dependable sources will do that, and avoid jams in their backlogs and in your operations.

### **Production Market**

Price has always been relative—dependent on the other factors which measure value. Be sure to keep it there, for we have a new element which must receive constant consideration—the dangers of inflationary or runaway markets. The supplier who charges all the traffic will bear is little short of a fifth columnist in this situation. The buyer who encourages suppliers in such a practice, by offering blank-check orders, can hardly avoid that same distinction.

The war is basically an industrial and economic competition. Full production from our facilities, at justifiable prices, comes nearer to being our first line of defense than oceans or armies.

The normal cycle takes us from a buyers' to a sellers' market with give and take expected and accepted as the advantage is shifted. This is an abnormal period in an abnormal cycle in an abnormal world. The fellow who takes unfair advantage of the situation is in reality cheating himself. This might be labeled a production market, for buyers and sellers must work together to secure the greatest possible production of essential materials in the shortest time. Price stability is an essential element in that program.

### **Hoarding and Speculation Taboo**

Expanding production plus inventory building have created a snowballing demand for several months. A general use of non-speculative purchasing policies will now give much needed relief to the current bottlenecks, and demand should be limited to protecting production requirements.

The price trend has been very satisfactory; under the circumstances, unusually so. With few exceptions, prices of essential materials have not become excessive. Every source of supply and substitution should be developed to keep that record satisfactory.

We continue to have excessive supplies of many commodities, and loss of export markets doesn't help their situation. Processing them for use by industry, wherever possible, should be encouraged.

The use of materials we can secure from the British Empire and from South or Central America should also be encouraged. The competitive interests which would normally prevent such imports must be actively resisted during this emergency.

Loose sales talk about shortages and scarcities must not be permitted to go unchallenged. Rumors can have the same effect on prices as actual conditions. This could become a paradise for speculators if they are allowed to operate freely.

### **Economic G-men Needed**

Those are essential steps in economic defense and the foundation of our total defense effort. There is no need to defend or justify any action or policy which will prevent price inflation. The attitude of all important leaders of Government and industry are concentrated in that statement by General Johnson: "Keep prices down; for God's sake, keep prices down!"

Full production from all our facilities, and their expansion where necessary, is the only safe solution. Production and processing executives must develop that production and plan the expansion. Sales and purchasing executives have a comparable responsibility to solve the economic and commercial problems which control or influence prices.

Economic G-men are needed. Informed buyers and sellers of commodities should promptly report any attempted bull movement or rumors which might touch one off. The clever restriction and control schemes of normal times are as dangerous as they are unnecessary now.

### **Help Them Help You**

Two divisions of the Advisory Commission on National Defense are especially concerned with the problem. The Materials Section is interested in securing ample supplies and adequate production so that potential shortages and bottlenecks do not mature into actual ones.

The Price Stabilization Section is responsible for price stability, which means reasonable and justifiable prices. Chief Economic G-man Leon Henderson has a fine record so far in this emergency production program. It is the result of bringing producers and consumers together on material problems and reducing the fever in markets by smothering scare rumors with facts and statistics.

Will we have priorities or allocation? is no longer debatable—we have them in some industries and will extend them to others when necessary.

Will we have price controls and government regulation of commodity distribution? That depends on how successful we are in developing production and maintaining price stability. If prices are fixed later, it will be essential to have them policed.

### **Enroll Now**

Enroll now, for the duration, and keep these important factors always in mind. A fair price should be asked and given in every transaction.

Hoarding materials for speculative purposes prevents their use. It is dangerous to our defense production and to our price structure. Asking or granting an unnecessary priority or preference presents the same danger.

With industries expanding to meet the demand and allocating production to meet essential requirements, turnover is more important than ever before. The cost of excessive inventories under these conditions is not limited to carrying charges; to those must be added the hazard of shortages with their consequent influence on prices.

A supplier who can deliver can do so at a fair, non-speculative price. It is your responsibility to see that is done.

### **Don't Rock the Boat**

If, a year from now, you can report "there have been no delays or shutdowns caused by shortage of materials or failure to secure tools or parts," be certain you can add "and no rock-the-boat prices or premiums have been paid."

Such a report would be ideal but, in many companies, impossible. Even a close approach to it requires a good and adequate organization in the purchasing department. It costs money to save money. It will also require a close and cooperative relationship with all other divisions of the organization.

And it will be essential that you are dependable in dealing with dependable suppliers.

Finally, if no rock-the-boat prices or premiums have been paid, it will prove that you rode the bumps and avoided the detours without getting singed or burning others who were playing the game straight.

# ASSOCIATION B E N E F I T S . . .

**M**OST salesmen will tell you that business begins with selling. Most manufacturing executives will say, "Oh, no! Business begins with manufacturing, for you can't sell a thing until you make it." But I want to assure you that business begins with buying. A manufacturer must buy before he can sell. He must buy the raw stuff that goes to make the finished product. But long before this, he must buy machinery and the plants to house it and he must hire the men, without whom the finest equipment in the world would be just so much worthless scrap.

And so we purchasing men must consider ourselves as the group that begins every business transaction. This puts a great responsibility upon us. We dare not flounder around in the dark; we must know where we are going. But very few of us are prophets. How many can tell what is going to happen tomorrow, or next week, or next year? What effect will the election have on our business? Naturally, we cannot be expected to have the answers to all these problems, and yet the executives of our companies expect us to be so close to the trend of things in every line of our activity that we will purchase wisely and economically the millions of items that go together to make up business.

Right here, is where the National Association of Purchasing Agents comes to our aid. In fact, it was just such requirements as this that led to the founding of this national group. This forum is for the interchange of ideas and information that would put at the disposal of any one member, the composite knowledge of the group.

Naturally, the N.A.P.A. is not a crystal gazer outfit where you can, for a small fee, look into a crystal ball and tell what the price of bananas will be next year, or where you can find out when the final decision between Britain and the Axis powers will occur, and what effect that will have on world markets. Not at all. Rather, the N.A.P.A. stands as a lighthouse, sending out warnings and charting the course to safe harbors.

In our individual day's work, each of us has or should have a lot of basic information that applies to the normal routine of our individual company's needs. Let us say that this information covers at least half or perhaps three-quarters of the total purchasing requirements of our firms. Then the remainder is subject to change and variation, and represents the uncharted portion of our course—the portion where the N.A.P.A. lighthouse can be our guide to untroubled waters of safe and economical buying.

Let us consider for a moment the kind of specific help N.A.P.A. is qualified to give us. Suppose a new program comes into being at your works, calling for materials you have never purchased before. Without some dependable informative agency to guide you, you would have to flounder around consulting trade papers and manufacturers' guides, trying to locate the proper sources of supplies and then wonder about the fairness of quoted prices and deliveries—in fact, you would be

Address before the Purchasing Agents Association of Elmira, N. Y., October 28, 1940.

**By C. G. BUNNELL**

**Purchasing Agent, Westinghouse Electric & Mfg. Co.**

**Formerly Vice President,  
National Association of Purchasing Agents**

all at sea and badly in need of a lighthouse. But by consulting the data made available by the N.A.P.A., your problem would become a routine matter.

Take for instance the monthly report of the Business Survey Committee of the N.A.P.A. headed by F. J. Heaslip of Fairbanks-Morse and Company, Chicago. This authoritative report covers the essential features of general business conditions, commodity prices, inventories, collections, credit, employment, and buying policy. Data on all these items are supplied by members of the committee in the east, middle west, west and Canada, and in addition to reporting the data, the trend is also reported, i.e., better, same, or worse than a month ago.

The chairman of this committee compiles a composite opinion from the reports from all the districts and this is considered as the opinion of the N.A.P.A. So accurate and dependable has this report proven that when released for publication it is widely reprinted and

*Continued on page 96*



# INDUSTRIAL SUPPLY

## RESULTS OF A NATIONAL SURVEY

### ADEQUATE LOCAL STOCKS



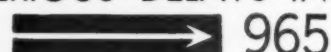
### INADEQUATE LOCAL STOCKS



### NO DELAYED DELIVERIES



### SERIOUS DELAYS IN DELIVERIES



Average Weeks Promised on Future Deliveries  
of Delayed Items - - - - - 5.195 Weeks

By HARTLEY W. BARCLAY

**L**ITTLE prospect of improvement in delivery dates is foreseen in the conclusions of a NATIONAL SURVEY OF ACTUAL AND POTENTIAL SHORTAGES IN INDUSTRIAL SUPPLIES recently completed after exhaustive research. More than 290 standard industrial supply items were listed in the survey report forms which were returned to the editors of PURCHASING by industrial purchasing agents and industrial supply distributors in representative industrial areas. Severe shortages and delayed delivery dates were found in twenty critical items of industrial supplies, each of which is indispensable to national defense production.

Discrepancies were noted, between promises of manufacturers and actual delivery dates, in many examples. All data compiled on the study was submitted to the NATIONAL DEFENSE ADVISORY COMMISSION for their guidance in considering the problems involved.

On standard items of industrial supplies, typically delayed delivery dates were as follows, according to representative buyers: Leather Belting, two to six weeks; Rubber Belting, three to six weeks; Ball Bearings, four to fifteen weeks; Pillow Blocks, two to eight weeks; Clutches, three to eight weeks; Roller Chains, two to eight weeks; Gears, two to twelve weeks; Steel or Iron Pulleys, two to five weeks; Speed Reducers, three to twelve weeks; Roller Bearings, four to twelve weeks; Chain Hoists, two to eight weeks; Electric Hoists, two to twelve weeks; Wire Rope, two to five weeks; Conveyor Belting, two to six weeks; Portable Electric Tools, two to eight weeks; Abrasive

Wheels, one to twelve weeks; Metal Saws, two to twelve weeks; Wood Saws, three to eight weeks; Hack Saws, two to twelve weeks; Files, two to twelve weeks; Small Tools, two to twenty weeks; Pipe Tools, two to eight weeks; Vises, two to eight weeks; Unit Heaters, two to eight weeks; Paint Brushes, one to eight weeks; Steel Shelving and Shop Furniture, two to eight weeks; Valves, three to eight weeks; Power Pipe Threading Machines, two to twelve weeks; Die Heads and Chasers, two to eight weeks; Switchgear, two to eight weeks; Electric Motors, two to twelve weeks; Gearmotors, four to eight weeks; Grinders, three to forty-eight weeks; Milling Cutters, three to forty weeks; Micrometers, two to twenty-eight weeks; Twist Drills, two to eight weeks; Taps and Dies, two to eight weeks; Reamers, two to eight weeks; Lathe Chucks, four to twelve weeks; Tool Holders, two to twelve weeks; Steel Pipe, two to twelve weeks; Pipe Fittings, one to six weeks; Nuts and Bolts, one to six weeks; Copper Tubing, two to six weeks; Welding Machines, two to eight weeks; Cap and Set Screws, one to six weeks, and many other items were discovered suffering from similar local shortages and delayed delivery dates.

Certain regions were found to enjoy better delivery dates and less local shortages than others. Cleveland was noted as enjoying especially favorable conditions, due largely to the cushioning effects of large local stocks in the hands of local distributors. Next best conditions were found in Detroit and Pittsburgh areas. Severe shortages in many lines were noticed especially in the New England and New York regions.



# SHORTAGES ACCUMULATE

**A NATIONAL SURVEY** was conducted by **PURCHASING** to determine the extent of shortages of stock and delayed delivery dates in industrial and mill supply items. The results are tabulated herewith.

Analysis of items by frequency of shortages was undertaken. The following data is based upon mentions per one hundred replies and therefore the items have been listed according to frequency of complaints, ranging from forty-one complaints per one hundred replies in the case of small tools to 10 complaints per one hundred in the case of wood saws. Abrasive wheels, 37; Micrometers, 36; Twist Drills, 27; Taps and Dies, 27; Reamers, 25; Steel Pipe, 25; Milling Cutters, 22; Small Lathes, 21; Hand Pipe Threading Tools, 20; Electric Motors, 18; Rules, 17; Metal Saws, 16; Paint Brushes, 16; Small Drill Presses, 16; Ball Bearings, 15; Rubber Belting, 15; Wire Rope, 14; Conveyor Belts, 13; Wrenches, 11; Valves, 11; Tool Holders, 11; Cold Finished Steel, 12; Hack Saws, 12; Chain Hoists, 12; Wood Saws, 10.

Distributors and manufacturers of industrial supplies are making individual efforts to prevent overbuying and inventory speculation in these items by

speculatively minded consumers in many regions. However, gradually local stocks of many items are being substantially depleted and possibly may not be replaced unless special arrangements are made through governmental channels to permit restocking of essential distributors stocks in areas serving national defense plants. Up to the present time the official attitude of the Priorities Committee of the National Defense Advisory Commission has been to tend to minimize dangers developing from these shortages which have already been brought to their attention. Industrial purchasing agents who experience delays in completing essential National Defense Contracts due to delays in filling orders for these products are requested to have their local distributors or other sources of supply get in touch with the National Defense Commission Priorities Committee to obtain prompt service, according to the latest Washington advice.

## TWENTY CRITICAL ITEMS IN WHICH DELAYED DELIVERIES ARE SERIOUS

*Small Tools	Small Lathes
Abrasive Wheels (not all types)	Pipe Threading Machines
*Micrometers	Electric Motors
*Twist Drills	Rules
Taps and Dies	Metal Saws
Portable Electric Tools	Paint Brushes
Files	Small Bench Drills
*Reamers	*Ball Bearings
Steel Pipe	Rubber Belting
*Milling Cutters	Wire Rope

\*—Items in which shortages were noted in June, 1940.

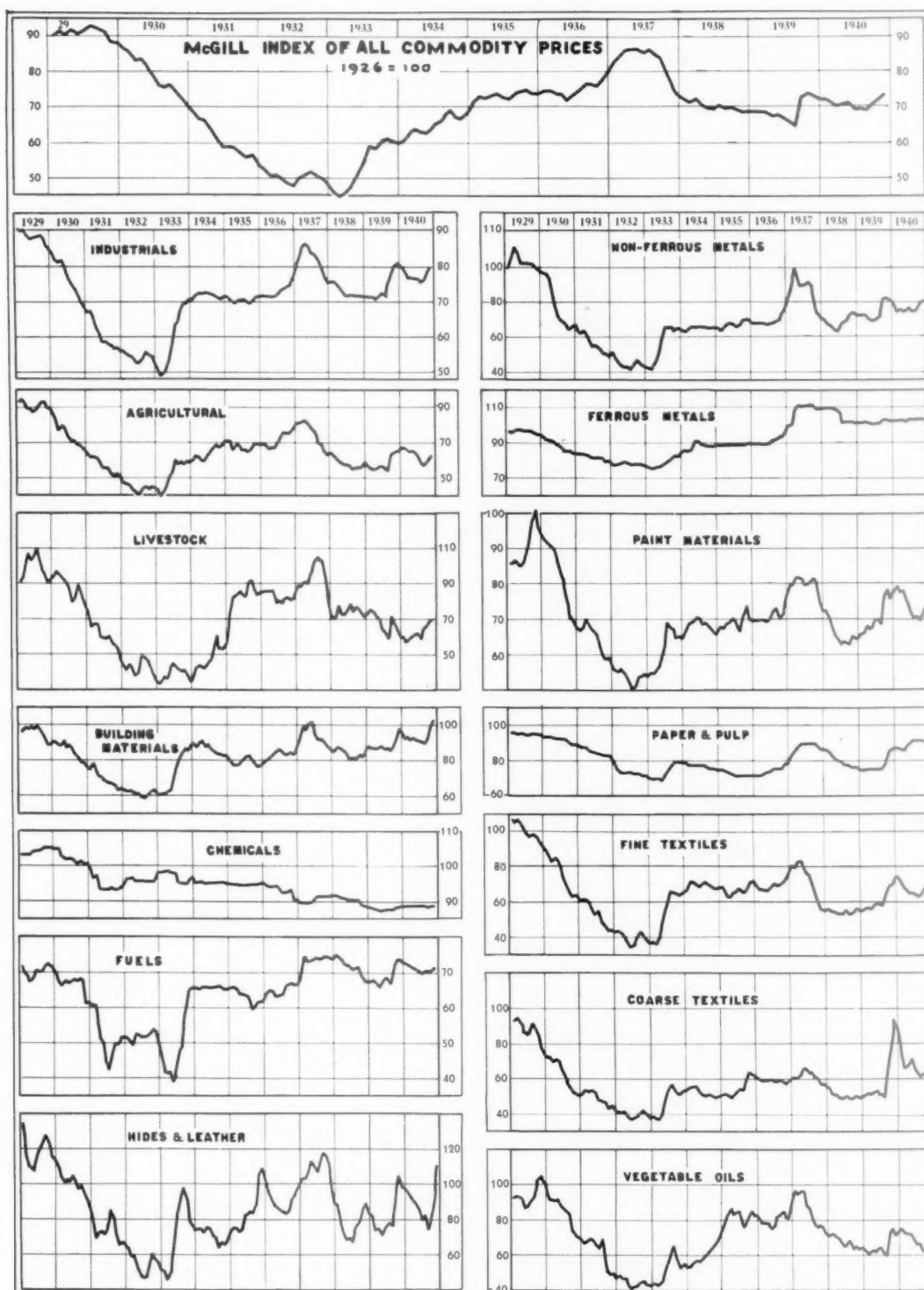


*"For six months he's been telling salesmen  
to come back the first of the year."*

# THE COURSE OF COMMODITY MARKETS

GRAPHIC REVIEW OF PRODUCTION, CONSUMPTION, AND  
PRICES ON FORTY IMPORTANT BASIC COMMODITY ITEMS  
— AN ESSENTIAL REFERENCE TABLE FOR THE BUYER.

Alcohol  
Aluminum  
Boxboard  
Burlap  
Cattle  
Cement  
China Wood  
Oil  
Coal  
Anthracite  
Bituminous  
Coke  
Copper  
Corn  
Cotton  
Cottonseed Oil  
Ferro-  
Manganese  
Flaxseed  
Fuel Oil  
Glass  
Hides  
Hogs  
Lard  
Lead  
Leather  
Petroleum  
Pig Iron  
Rayon  
Rosin  
Rubber  
Sheep  
Shellac  
Silk  
Soya Bean Oil  
Steel  
Sulphate Pulp  
Sulphite Pulp  
Tin  
Turpentine  
Wheat  
Wool  
Zinc





# ALCOHOL

Highest Production—114,516,000 gal. in 1929  
Highest Price—\$1.16 per gal. in 1920  
Lowest Price—26½c in 1939

	Production Denatured (000 omitted —gal.)	Consumption (000 omitted, gal.)	Stocks (000 omitted gallons)	Price S.D. #1 per gal.
1929	114,516	114,372	1,054	\$ .57
1930	91,500	88,884	3,529	.521
1931	81,636	83,508	1,629	.388
1932	65,880	54,932	2,750	.424
1933	73,812	75,360	1,114	.415
1934	95,386	95,377	1,063	.392
1935	97,291	96,700	1,632	.372
1936	99,288	99,796	1,131	.327
1937	98,887	98,765	1,153	.335
1938	92,920	92,815	1,279	.317
1939	113,915	113,928	1,173	.275
1940	.....	.....	.....	.298
Jan.	10,398	10,147	1,417	.295
Feb.	8,460	8,505	1,366	.295
Mar.	9,524	9,498	1,392	.295
Apr.	9,994	7,793	1,591	.295
May	10,037	10,037	1,586	.295
June	9,706	9,625	1,662	.295
July	10,443	9,497	2,605	.295
Aug.	11,510	11,195	2,919	.295
Sept.	13,694	14,157	2,445	.295
Oct.	15,098	15,566	1,975	.305
Nov.	13,158	13,544	1,586	.305
Dec.	.....	.....	.....	.315

# ALUMINUM

Highest Annual Production—375,000,000 (est.) in 1940  
Highest Price—67c in 1916  
Lowest Price—17c in 1940

	Primary Production (pounds) (000 omitted)	Price per lb.
1929	227,973	\$ .243
1930	229,037	.2379
1931	177,545	.233
1932	104,888	.233
1933	85,125	.233
1934	74,177	.2158
1935	119,295	.205
1936	224,929	.205
1937	292,681	.2008
1938	286,882	.20
1939	327,090	.20
1940	.....	.1869
Jan.	.....	.20
Feb.	.....	.20
Mar.	.....	.1975
Apr.	.....	.19
May	.....	.19
June	.....	.19
July	.....	.19
Aug.	.....	.18
Sept.	.....	.18
Oct.	.....	.18
Nov.	.....	.175
Dec.	.....	.17

# BOXBOARD

4,882,636 short tons in 1939  
Highest Annual Production—

	Production (Short tons)	New Orders (Short tons)
1934	2,839,705	2,807,470
1935	3,294,055	3,281,525
1936	3,658,871	3,720,996
1937	4,293,717	4,163,060
1938	3,816,502	3,827,460
1939	4,882,636	4,984,774
1940	.....	.....
Jan.	430,895	398,125
Feb.	399,970	367,897
Mar.	406,922	392,794
Apr.	417,566	480,250
May	470,244	417,221
June	440,725	437,874
July	429,561	398,191
Aug.	452,604	414,966
Sept.	402,548	399,133
Oct.	473,169	486,181
Nov.	.....	.....
Dec.	.....	.....

# BURLAP

Highest Annual Imports—657,723,799 yards in 1937  
Highest Price—25c per yd. in 1918  
Lowest Price—4.1c in 1910 and 1921

	Imports (yards) (000 omitted)	U. S. Con- sumption (yds. —000 omitted)	U. S. (yds. 000 omitted)	Price per yd. spot. 40— 10½ oz.
1935	472,785	611,200	275,000	\$ .0593
1936	557,347	785,000	355,000	.0537
1937	657,724	810,000	349,000	.054
1938	504,333	692,000	312,000	.0493
1939	441,484	711,949	240,000	.0694
1940	.....	.....	.....	.0769
Jan.	64,563	55,000	231,000	.095
Feb.	35,005	52,000	213,000	.0787
Mar.	39,537	50,000	210,000	.0731
Apr.	17,435	44,000	232,000	.0747
May	41,818	52,754	276,000	.0795
June	34,896	49,000	294,000	.0762
July	66,853	54,139	295,000	.0733
Aug.	24,899	55,188	274,000	.0699
Sept.	56,001	60,000	284,000	.0711
Oct.	48,570	71,000	271,000	.0733
Nov.	.....	57,000	253,000	.0769
Dec.	.....	53,000	260,000	.0806

# CATTLE

Largest number cattle on farms—74,262,000 on Jan. 1, 1934  
Highest Price—\$17.30 in 1919  
Lowest Price—\$3.712 in 1933

	No. on Farms Jan. 1 (000 omitted)	Inspected Slaughter (000 omitted)	Price per cwt.
1929	58,877	8,324	\$13.32
1930	61,003	8,170	11.097
1931	63,030	8,108	8.116
1932	65,770	7,625	6.748
1933	70,214	8,655	5.33
1934	74,262	9,943	6.617
1935	68,529	9,666	9.959
1936	67,929	10,972	8.411
1937	66,803	10,070	11.225
1938	66,083	9,776	9.208
1939	66,789	9,446	9.546
1940	.....	.....	10.041
Jan.	68,769	827	9.369
Feb.	.....	715	9.136
Mar.	.....	721	9.334
Apr.	.....	774	9.453
May	.....	796	9.652
June	.....	737	9.429
July	.....	822	9.945
Aug.	.....	842	10.141
Sept.	.....	812	10.684
Oct.	.....	968	11.028
Nov.	.....	883(P)	11.044
Dec.	.....	.....	11.282

# CEMENT

Highest Production—175,968,000 bls. in 1928  
Highest Price—\$1.90 per bbl. in 1920  
Lowest Price—84c per bbl. in 1913

	Production (bbls.—000 omitted)	Consumption Shipments (bbls.—000 omitted)	Stocks (bbls.—000 omitted)	Price f.o.b. mill, bbl.
1929	170,198	169,868	23,519	\$1.533
1930	160,905	158,744	25,848	1.483
1931	124,570	126,465	24,177	1.177
1932	76,509	80,579	20,351	1.162
1933	63,373	64,086	19,541	1.454
1934	77,682	75,917	21,460	1.60
1935	76,472	74,934	22,949	1.666
1936	112,368	112,566	22,864	1.70
1937	116,478	114,010	24,879	1.70
1938	105,548	106,533	23,954	1.70
1939	121,819	122,276	23,495	1.70
1940	.....	.....	.....	1.70
Jan.	6,205	3,893	25,759	1.70
Feb.	5,041	4,907	25,894	1.70
Mar.	7,918	7,716	26,118	1.70
Apr.	10,043	10,829	25,348	1.70
May	12,633	13,206	24,758	1.70
June	12,490	13,223	24,010	1.70
July	12,290	13,442	22,855	1.70
Aug.	12,712	14,018	21,549	1.70
Sept.	13,105	14,741	19,921	1.70
Oct.	13,935	15,776	18,009	1.70
Nov.	12,689	10,329	20,369	1.70
Dec.	.....	.....	.....	1.70

### ANTHRACITE COAL

Highest annual production—99,612,000 tons in 1917  
Highest price—\$13.50 in 1925  
Lowest Price—\$4.50 in 1913 and 1939

	Production (short tons— 000 omitted)	Price Stove Coal, net ton mines
1929	73,828	\$10.10
1930	69,385	10.98
1931	59,646	10.03
1932	49,855	9.23
1933	49,541	9.13
1934	57,168	9.15
1935	52,159	7.60
1936	54,579	6.79
1937	51,856	5.95
1938	46,099	6.05
1939	50,912	5.558
1940	50,024	6.124
Jan.	5,622	6.25
Feb.	3,546	6.25
Mar.	3,273	6.25
Apr.	3,746	5.875
May	3,957	5.81
June	4,367	5.925
July	4,408	6.025
Aug.	3,775	6.13
Sept.	4,056	6.225
Oct.	4,234	6.25
Nov.	3,869	6.25
Dec.	4,671	6.25

### COAL, Bituminous

Highest Production—579,386,000 tons in 1918  
Highest Price—\$9.15 per ton in 1920  
Lowest Price—\$1.05 per ton in 1915

	Production (Short Tons— 000 omitted)	Consumption Total Indus- trial (000 omitted)	Stocks Total Indus- trial (000 omitted)	Price Clearfield Mine Run, ton
1929	534,989	444,546	39,007	\$1.79
1930	467,526	397,283	35,497	1.527
1931	382,089	317,572	33,655	1.479
1932	309,710	246,608	26,463	1.271
1933	333,631	254,091	31,135	1.383
1934	359,368	275,840	32,529	1.939
1935	372,373	290,289	34,876	1.867
1936	439,088	345,878	39,518	1.893
1937	445,531	375,717	45,078	2.35
1938	342,490	286,119	38,228	2.423
1939	390,008	322,425	43,382	2.556
1940	453,307	353,360	39,429	2.571
Jan.	44,940	35,360	39,429	2.65
Feb.	39,105	30,738	38,270	2.625
Mar.	35,210	30,469	34,348	2.55
Apr.	32,962	27,846	34,715	2.55
May	35,468	27,458	36,480	2.55
June	32,340	26,708	38,978	2.55
July	36,080	27,485	42,713	2.55
Aug.	39,240	28,768	45,455	2.55
Sept.	38,413	28,384	48,331	2.55
Oct.	38,700	32,164	48,665	2.575
Nov.	40,012	.....	.....	2.375
Dec.	40,600	.....	.....	2.575

### CHINA WOOD OIL

Highest Annual Imports—174,884,803 pounds in 1937  
Highest Price—40c per lb. in 1923  
Lowest price—5c per lb. in 1933

	Production Imports (pounds)	Consumption (Factory- pounds)	Stocks end of period (pounds)	Price (drums, per lb.)
1929	119,677,718	97,473,800	29,411,100	\$ .146
1930	126,322,599	87,092,168	49,894,404	.097
1931	79,311,155	82,313,511	33,401,550	.0707
1932	75,922,229	67,947,614	30,914,819	.0624
1933	118,759,963	91,549,437	41,750,367	.0685
1934	109,787,088	105,978,121	31,494,587	.089
1935	120,058,817	114,286,682	19,008,265	.1769
1936	134,829,996	107,874,587	28,980,550	.1624
1937	174,884,803	120,378,145	48,655,853	.1756
1938	107,455,674	87,415,084	61,188,828	.1287
1939	78,717,634	91,092,103	31,556,115	.2103
1940	.....	.....	.....	.254
Jan.	16,158,365	.....	.....	.282
Feb.	7,262,162	.....	.....	.279
Mar.	8,885,780	14,760,580	45,936,363	.259
Apr.	1,279,133	.....	.....	.245
May	11,861,972	.....	.....	.241
June	14,874,105	15,091,825	57,245,523	.223
July	18,720,805	.....	.....	.245
Aug.	9,941,345	.....	.....	.249
Sept.	1,883,724	14,237,995	66,733,794	.252
Oct.	4,414,004	.....	.....	.257
Nov.	40,012	.....	.....	2.575
Dec.	.....	.....	.....	.258

### COKE

Highest Annual Production—59,883,845 tons in 1929  
Highest Price—\$18.50 in 1920  
Lowest Price—\$1.40 in 1915

	Production (Short tons 000 omitted)	Price Furnace Coke, ton Connellsville
1929	59,884	\$2.795
1930	47,972	2.594
1931	33,484	2.48
1932	21,789	2.135
1933	27,589	2.50
1934	31,822	3.772
1935	35,141	3.706
1936	46,275	2.854
1937	52,375	4.374
1938	32,496	4.003
1939	44,425	4.232
1940	.....	4.418
Jan.	4,945	4.409
Feb.	4,172	4.125
Mar.	4,260	4.125
Apr.	4,086	4.125
May	4,350	4.125
June	4,526	4.125
July	4,850	4.354
Aug.	4,960	4.50
Sept.	4,999	4.50
Oct.	5,203	4.50
Nov.	.....	4.819
Dec.	.....	5.31

### COPPER

Highest Production—1,033,710 tons in 1940  
Highest Price—37c per lb. in 1917  
Lowest Price—5c per lb. in 1932-33

	Production U. S. Refined (tons)	Consumption Deliveries (tons)	Stocks Refined (tons)	Price Elec. Valley per lb.
1934	336,710	505,709	354,436	\$ .0866
1935	496,658	619,679	231,415	.0888
1936	748,660	819,007	161,068	.0972
1937	964,176	865,893	259,351	.1339
1938	637,485	607,081	289,755	.1023
1939	818,289	948,559	159,485	.112
1940	1,033,710	1,050,413	.....	.1153
Jan.	80,501	104,545	135,440	.1222
Feb.	82,761	72,809	145,393	.1141
Mar.	86,295	71,893	159,795	.1139
Apr.	80,964	71,639	169,120	.1133
May	86,029	76,485	178,664	.1133
June	86,077	65,155	199,586	.1138
July	90,995	74,758	215,823	.1081
Aug.	80,851	97,719	198,955	.1095
Sept.	82,843	96,485	185,313	.1154
Oct.	83,076	103,771	164,618	.12
Nov.	96,283	102,483	158,418	.12
Dec.	97,035	112,671	142,772	.12

### CORN

Highest Annual Production—3,070,000,000 bu. in 1920  
Highest Price—\$2.21 a bu. in 1917  
Lowest Price—21 1/4c per bu. in 1932 and 1933

	Production (Bu.—000 omitted)	Stocks U. S. Visible (000 omitted —bu.)	Price #3 Yellow per bu.
1929	2,521,032	17,140	\$ .928
1930	2,080,421	9,892	.818
1931	2,575,611	16,390	.521
1932	2,931,281	11,967	.305
1933	2,399,632	28,985	.399
1934	1,461,123	66,689	.6497
1935	2,303,747	39,875	.8148
1936	1,507,089	7,173	.8382
1937	2,651,284	13,142	1.03
1938	2,562,197	34,803	.5454
1939	2,602,133	48,866	.5008
1940	.....	.....	.6303
Jan.	.....	44,476	.5869
Feb.	.....	40,355	.5776
Mar.	.....	39,437	.5803
Apr.	.....	38,518	.6302
May	.....	33,970	.6747
June	.....	23,639	.6536
July	.....	24,938	.6483
Aug.	.....	24,711	.653
Sept.	.....	26,454	.6423
Oct.	.....	43,611	.6506
Nov.	.....	53,488	.6487
Dec.	2,449,200 (est.)	58,730	.6176
Jan. 1, 1941	.....	62,600	.....

## COTTON

Highest Production—18,946,000 bales in 1937  
 Highest Price—43.75c in 1920  
 Lowest Price—5c in 1932

	Production (Bales)	Consumption (Bales)	Stocks Calendar year beginning 1929		Price Middling 15/16 spot per lb.
			On Hand in Consuming Establish. (Bales)		
1929-30	14,825,000	6,105,840	7,759,000		\$ .1933
1930-31	13,932,000	5,262,974	10,031,480		.1381
1931-32	17,096,000	4,866,016	12,045,131		.0876
1932-33	13,002,000	6,137,395	11,879,851		.0662
1933-34	13,047,000	5,700,253	11,976,837		.0886
1934-35	9,636,000	5,360,867	10,869,206		.1255
1935-36	10,638,391	6,351,160	9,820,335		.1208
1936-37	12,398,882	7,950,079	9,792,416		.1228
1937-38	18,945,028	5,747,978	13,606,005		.1164
1938-39	11,944,340	6,858,426	17,040,606		.0886
1939-40	11,815,759	7,745,574	16,441,206		.0966
1940					.106
Jan.		730,143	14,983,750		.1137
Feb.		662,659	13,858,584		.113
Mar.		626,331	13,000,020		.111
Apr.		623,893	12,212,619		.1109
May		636,467	11,401,132		.1053
June		556,529	10,732,174		.1091
July		597,850	10,095,720		.1062
Aug.		654,503	9,858,253		.1005
Sept.		639,252	11,522,456		.0989
Oct.		770,702	15,102,178		.0982
Nov.		744,088	16,409,512		.1017
Dec.	12,686,000 (est.)				.1038

## COTTONSEED OIL, Crude

Highest Annual Production—1,804,117 in 1927  
 Highest Price—28.1c in 1919  
 Lowest Price—2.375c in 1932

	Production (pounds) (000 omitted)	Consumption (pounds) (000 omitted)	Stocks (pounds) (000 omitted)	Price per lb.
1929	1,585,361	1,578,131	115,885	8.1c
1930	1,616,102	1,602,064	114,498	6.8
1931	1,416,800	1,403,122	126,564	5.6
1932	1,571,049	1,509,408	143,902	3.2
1933	1,399,655	1,348,191	170,430	3.6
1934	1,224,085	1,298,590	97,469	5.5
1935	1,184,039	1,182,334	132,843	9.24
1936	1,247,297	1,252,397	143,243	8.58
1937	1,626,215	1,568,646	200,603	7.99
1938	1,677,673	1,703,383	175,464	6.685
1939	1,390,086	1,392,438	181,235	5.563
1940		Quarterly		5.242
Jan.				5.933
Feb.				5.983
Mar.	403,185	403,824	186,124	5.882
Apr.				5.841
May	118,345	244,400	65,393	5.559
June				5.083
July				5.288
Aug.	147,235	133,285	80,274	4.712
Sept.				4.684
Oct.				4.401
Nov.				4.717
Dec.				4.813

## FLAXSEED

Highest Annual Production—31,220,000 bu. in 1924  
 Highest Price—\$6.21 per bu. in 1919  
 Lowest Price—93½c in 1932

	Production (bushels— 000 omitted)	Consumption Factory— (tons)	Stocks (tons)	Price per bu. Duluth
1929	15,924	1,138,250	121,782	\$2.779
1930	21,673	798,382	125,218	2.394
1931	11,755	797,960	104,192	1.511
1932	11,511	495,994	87,384	1.204
1933	6,904	601,068	75,975	1.575
1934	5,661	532,965	51,836	1.865
1935	14,520	731,910	119,663	1.728
1936	5,273	672,306	80,193	1.914
1937	7,089	951,073	92,250	2.123
1938	8,152	635,589	66,894	1.892
1939	20,152	808,314	136,241	1.804
1940		Quarterly Figures		1.789
Jan.				2.149
Feb.				2.109
Mar.		221,826	93,958	2.082
Apr.				2.091
May				1.958
June		185,825	88,146	1.768
July				1.629
Aug.				1.525
Sept.		194,395	197,062	1.469
Oct.				1.473
Nov.				1.599
Dec.	31,127 (est.)			1.623

## GLASS

Highest annual production—198,072,000 sq. ft. in 1936  
 Highest Price—\$7.12 per box in 1920  
 Lowest Price—\$1.71 in 1934

	Polished Plate Glass Production (000 omit. —sq. ft.)	Price Window Glass Per Box
1929	150,504	\$2.945
1930	105,828	2.63
1931	86,976	2.05
1932	52,202	2.118
1933	86,040	2.15
1934	94,567	1.93
1935	179,817	2.09
1936	198,072	2.62
1937	192,588	2.868
1938	85,725	2.50
1939	141,818	2.658
1940		2.70
Jan.	17,257	2.70
Feb.	13,175	2.70
Mar.	14,302	2.70
Apr.	12,367	2.70
May	11,721	2.70
June	9,783	2.70
July	8,522	2.70
Aug.	12,533	2.70
Sept.	14,091	2.70
Oct.	17,070	2.70
Nov.	16,059	2.70
Dec.		2.70

## HOGS

Largest number hogs on farms—69,304,000 in 1923  
 Highest Price—\$22.20 per cwt. in 1919  
 Lowest Price—\$3.00 in 1932

	No. on Farms Jan. 1 (000 omitted)	Inspected Slaughter (000 omitted)	Price per cwt.
1929	59,042	48,445	\$10.30
1930	55,705	44,266	9.527
1931	54,835	44,772	6.164
1932	59,301	45,245	3.856
1933	62,127	47,226	4.00
1934	58,621	43,876	4.854
1935	39,004	26,058	9.421
1936	42,837	36,055	9.941
1937	42,770	31,642	10.324
1938	44,218	36,186	8.185
1939	49,293	41,367	6.651
1940			5.766
Jan.	58,312	5,356	5.338
Feb.		4,277	5.155
Mar.		3,981	5.102
Apr.		3,610	5.487
May		3,890	5.675
June		3,886	5.046
July		3,219	5.946
Aug.		3,045	6.285
Sept.		3,168	6.415
Oct.		4,483	6.281
Nov.			6.134
Dec.			6.322

## LARD

Highest Annual Production—1,763,143,000 pounds in 1929  
 Highest Price—36.6c per lb. in 1919  
 Lowest Price—4.1c per lb in 1932

	Production (lbs.—000 omitted)	Consumption (lbs.—000 omitted)	Stocks Cold Storage Holdings (000 omitted) 1st of year	Price Choice Western lb. Chicago
1929	1,763,143	918,339	85,217	\$ .1207
1930	1,521,160	895,582	82,098	.1098
1931	1,554,018	975,932	51,434	.0822
1932	1,573,460	1,031,461	51,224	.0518
1933	1,679,272	1,003,672	41,088	.0603
1934	1,340,795	912,960	132,510	.0736
1935	662,060	630,090	118,107	.1435
1936	992,169	786,910	52,718	.1275
1937	787,493	742,631	145,809	.1298
1938	1,076,152	817,822	53,693	.0987
1939	1,351,768	985,000	107,421	.0812
1940				.0722
Jan.	182,039	113,981	162,105	.0784
Feb.	141,687	62,089	202,175	.0795
Mar.	129,467	96,676	256,640	.0758
Apr.	116,671	100,547	268,777	.0788
May	126,550	93,869	266,052	.0754
June	124,260	88,726	283,937	.0739
July	105,785	81,112	306,774	.0763
Aug.	90,525	110,525	303,208	.0686
Sept.	84,310		272,290	.0675
Oct.		110,954	235,690	.0645
Nov.			223,166	.0653
Dec.			232,472	.0627
Jan., 1941			286,773	....



PIG IRON			STEEL			FERRO-MANGANESE		
Highest Annual Production—47,360,000 short tons in 1929			Highest Annual Production—65,247,000 net tons in 1940			Highest Annual Production—473,667 long tons in 1940		
Highest Price—\$52.11 in 1917			Highest price since 1928—\$2.512 in 1937			Highest Price—\$475 per ton in 1917		
Lowest Price—\$12.34 in 1915			Lowest price—\$1.792 in 1933			Lowest Price—\$36.50 in 1911		
Production (short tons- 000 omitted)	Price Iron Age Composite		Ingot Prod. (net tons)	Shipments Finished Prod. 000 omitted net tons	Price Iron Age Comp.	Production (Long tons)	Price Per Ton	
1929	47,360	\$18.43	61,432	16,825	\$2.225	376,094	\$103.46	
1930	35,167	17.17	44,347	12,842	2.048	309,713	99.37	
1931	20,468	15.51	28,480	8,405	1.956	237,568	89.02	
1932	9,729	14.00	15,079	4,329	1.903	64,223	71.99	
1933	14,798	15.20	25,641	6,324	1.879	153,274	75.41	
1934	17,821	17.58	29,062	6,523	2.039	139,092	85.00	
1935	23,529	18.03	38,012	8,112	2.058	207,393	85.00	
1936	34,293	18.90	53,213	11,945	2.079	285,295	75.62	
1937	41,005	22.74	55,443	14,184	2.457	363,950	97.19	
1938	21,036	21.67	31,071	7,286	2.265	194,646	97.08	
1939	35,317	21.19	51,585	11,752	2.258		86.55	
1940	46,816	22.638	65,247	14,976	2.261	473,667	110.00	
Jan.	4,032	22.61	5,655	1,145	2.261	43,240	100.00	
Feb.	3,311	22.61	4,409	1,009	2.261	38,720	100.00	
Mar.	3,270	22.61	4,265	932	2.261	46,260	100.00	
Apr.	3,137	22.61	3,975	908	2.261	43,384	100.00	
May	3,514	22.61	4,841	1,084	2.261	44,973	100.00	
June	3,819	22.61	5,533	1,210	2.261	44,631	100.00	
July	4,054	22.61	5,595	1,297	2.261	43,341	120.00	
Aug.	4,238	22.61	6,033	1,456	2.261	37,003	120.00	
Sept.	4,177	22.61	5,895	1,393	2.261	33,024	120.00	
Oct.	4,446	22.61	6,462	1,572	2.261	32,270	120.00	
Nov.	4,403	22.61	6,283	1,425	2.261	31,155	120.00	
Dec.	4,415	22.94	6,301	1,545	2.261	35,660	120.00	

HIDES				LEATHER			
Highest Production—10,182,146 in 1926				Highest Production—22,628,000 pieces in 1936			
Highest Price—25.75c in 1928				Highest Price—80c in 1928			
Lowest Price—4.25c in 1932				Lowest Price—36c in 1932			
Production Inspected Cattle Slaughter (000 omitted)	Consumption Total Wettings Pieces (000 omitted)	Stocks Raw Stocks in Process and Finished (hides)	Price Light Native Cows per lb.	Production Cattle Hide Leather (000 omitted)	Consumption All Domestic Tanned Cattle Hide Leather (000 omitted)	Stocks Raw—in process, and finished (000 omitted)	Price Belting— #2 Butt Bends
1929	8,324	19,018	\$ 15.65	19,148	19,854	15,594	\$ .6976
1930	8,170	17,078	.1169	17,676	16,310	16,662	.6121
1931	8,108	16,041	.0849	16,235	16,751	15,915	.4643
1932	7,625	14,661	.0565	14,583	15,219	15,024	.4121
1933	8,635	17,432	.094	17,115	18,278	14,811	.4677
1934	9,945	19,914	.0876	19,771	19,186	18,007	.4654
1935	9,676	21,096	.099	21,932	21,759	17,735	.4967
1936	10,972	22,888	.1143	22,628	22,775	17,123	.5608
1937	10,070	21,726	.1512	22,380	22,013	15,373	.6168
1938	9,776	19,187	.1043	19,047	20,291	13,645	.529
1939	9,446	21,768	.1206	22,074	22,470	12,997	.5287
1940			.1269				.5367
Jan.	827	1,997	.1459	1,972	1,912	13,029	.555
Feb.	715	1,788	.1318	1,892	1,948	12,887	.595
Mar.	721	1,592	.1282	1,700	1,882	12,578	.59
Apr.	774	1,514	.1325	1,566	1,691	12,529	.56
May	796	1,700	.1242	1,590	1,617	12,508	.54
June	737	1,480	.1111	1,452	1,475	12,737	.54
July	822	1,633	.1231	1,534	1,744	12,659	.5325
Aug.	842	1,830	.1025	1,739	1,892	12,664	.503
Sept.	812	1,720	.1197	1,597	1,743	12,740	.47
Oct.	968	2,058	.1325	1,977	1,818	13,176	.5075
Nov.	883	1,992	.139	1,944	1,798	13,529	.535
Dec.			.133				.535

LEAD				ZINC			
Highest Annual Production—696,000 tons in 1926				Highest Annual Production—643,386 tons in 1940			
Highest Price—11c per lb. in 1917				Highest Price—27½c per lb. in 1915			
Lowest Price—2.65c per lb. in 1932				Lowest Price—2.67c per lb. in 1932			
Production Refined (tons)	Consumption Shipments (Refined - tons)	Stocks American (tons)	Price A. S. & R. price per lb. N. Y.	Production U. S. Slab, tons	Consumption Deliveries tons	Stocks tons	Price Pr. Western per lb. N. Y.
1930	688,787	637,384	\$ .055	631,601	602,601	75,430	\$ .0684
1931	478,592	429,949	.042	504,463	436,275	143,579	.0491
1932	342,137	317,261	.032	300,738	314,514	129,842	.0399
1933	374,153	347,156	.039	213,531	218,517	124,856	.0325
1934	412,298	379,807	.039	324,705	344,001	105,560	.044
1935	421,764	433,456	.041	366,933	352,663	119,830	.0451
1936	463,006	513,361	.047	431,499	465,746	83,758	.0469
1937	533,215	575,933	.06	523,166	561,969	44,955	.0528
1938	408,539	421,625	.047	589,619	569,241	64,776	.0687
1939	497,991	555,074	.051	456,990	395,554	126,769	.0499
1940			.052	538,198	598,972	65,995	.0551
Jan.	49,683	39,875	.055	643,386	696,497		.0673
Feb.	43,317	39,176	.051	52,399	54,862	63,532	.0603
Mar.	48,400	46,353	.051	53,387	51,050	65,869	.0593
Apr.	35,423	46,496	.051	56,184	49,909	72,144	.0614
May	46,268	46,919	.05	55,055	46,803	78,396	.0614
June	42,306	49,904	.05	51,457	57,224	72,629	.0619
July	44,596	52,560	.05	48,213	53,935	66,907	.0663
Aug.	47,614	51,643	.049	52,098	57,606	61,399	.0664
Sept.	51,441	53,456	.049	51,010	64,065	48,344	.0679
Oct.	56,600	62,496	.053	52,869	67,650	33,563	.0733
Nov.	57,926	57,510	.057	56,372	65,713	24,222	.0764
Dec.			.055	56,459	62,295	18,386	.0764
				59,883	65,385	12,884	

# PETROLEUM

Highest Production—1,279,160,000 bbls. in 1937  
Highest Price—\$3.50 per bbl. in 1920  
Lowest Price—25c in 1933

	Production Crude, bbls. (000 omitted)	Consumption Crude, minus Calif. (000 omitted)	Stocks bbls. (000 omitted) end of year	Price Mid-Conti- nent 32-32.9 per bbl.
1929	1,007,328	768,379	381,198	\$1.189
1930	898,011	736,560	361,876	1.066
1931	851,081	731,490	322,603	.544
1932	785,159	652,025	294,172	.792
1933	905,656	711,146	320,989	.577
1934	908,065	746,810	301,890	.92
1935	996,596	793,387	277,225	.92
1936	1,099,687	888,449	253,343	1.015
1937	1,279,160	978,905	276,261	1.131
1938	1,214,355	952,373	239,470	1.905
1939	1,264,962	1,034,892	205,282	.936
1940				.94
Jan.	113,140	91,133	206,034	.94
Feb.	108,668	85,961	210,037	.94
Mar.	120,075	93,382	216,730	.94
Apr.	116,045	89,660	223,688	.94
May	118,283	94,484	227,369	.94
June	111,690	90,616	227,977	.94
July	113,244	91,783	228,634	.94
Aug.	110,523	90,876	229,159	.94
Sept.	109,337	90,706	228,982	.94
Oct.	113,418	92,256	228,848	.94
Nov.				.94
Dec.				.94

# GAS AND FUEL OIL

Highest Production—484,000,000 bbls. (estimated) in 1940  
Highest Price—\$1.80 in 1925  
Lowest Price—60c in 1931-32

	Production bbls. (000 omitted)	Consumption Domestic, bbls. (000 omitted)	Stocks Total U. S. (bbls.) (000 omitted)	Price Bunker C N. Y. bbl.
	336,967	334,668	135,856	\$ .837
	294,750	308,157	130,753	.724
	316,439	316,344	123,500	.88
	335,353	331,989	110,397	1.24
	360,061	366,723	103,984	1.07
	413,874	410,641	107,049	1.082
	458,770	442,355	104,073	1.308
	446,664	409,282	138,195	1.042
	467,690	454,765	126,008	1.047
				1.340
				1.419
	44,630	54,935	115,743	.150
	40,942	44,746	114,424	1.50
	43,216	47,375	102,656	1.50
	40,632	38,736	104,135	1.50
	41,089	36,076	118,055	1.465
	39,623	32,076	124,733	1.35
	39,687	31,293	132,441	1.304
	41,323	34,629	139,462	1.235
	40,239	36,282	143,775	1.20
	42,325	43,550	143,695	1.20
				1.20
				1.20

# RUBBER

Highest Annual Imports—584,851 long tons in 1937  
Highest Price—\$1.21 in 1925  
Lowest Price—2.56c in 1932

	Imports (Long Tons)	Consumption By U. S. Mfrs. (Long Tons)	Stocks Total on Hand and Afloat (Long Tons)	Prices Spot, per lb. N. Y.
1929	560,865	469,106	167,525	\$ .2124
1930	488,443	377,231	258,281	.1194
1931	495,163	348,985	376,696	.0611
1932	400,787	317,860	426,595	.0341
1933	411,615	405,356	420,147	.0593
1934	469,484	454,728	400,276	.1289
1935	448,126	493,412	342,094	.1232
1936	490,855	574,303	275,431	.1644
1937	584,851	543,600	325,303	.1936
1938	400,178	419,589	276,605	.1467
1939	500,261	577,591	231,375	.1766
1940				.2009
Jan.	72,520	54,978	247,115	.1907
Feb.	43,088	49,832	261,033	.1881
Mar.	59,258	50,192	256,033	.1851
Apr.	70,699	50,103	265,016	.1909
May	51,431	51,619	270,810	.2136
June	53,889	46,506	287,373	.2205
July	69,474	47,011	329,851	.2123
Aug.	73,028	50,234	354,288	.1962
Sept.	78,793	50,206	378,391	.1934
Oct.	74,716	56,477	425,977	.2022
Nov.	72,901	54,652	435,038	.2096
Dec.				.2084

# TIN

Highest Annual Imports—195,156,173 lbs. in 1929  
Highest Price—\$1.00 per lb. in 1918  
Lowest Price—18.35c per lb. in 1932

	Production U. S. Imports (000 omitted— lbs.)	Consumption U. S. Deliver- ies (gross tons)	Stocks U. S. Visible Sup.-(gross tons)	Price Straits, lb. N. Y.
	195,165	89,110	2,820	\$ .4519
	180,844	78,225	4,693	.3170
	147,984	63,450	6,254	.2447
	77,995	36,320	4,496	.2201
	140,766	57,815	7,504	.3912
	89,568	46,215	2,638	.5216
	143,938	65,280	2,312	.504
	170,305	74,005	5,095	.4626
	197,377	83,660	6,385	.5424
	111,329	50,660	5,157	.4226
	157,029	71,926	3,302	.502
		112,497		.4982
	19,826	9,780	1,749	.4672
	14,557	6,600	2,078	.4594
	23,148	9,244	2,635	.4709
	17,664	7,855	2,964	.4682
	17,880	7,905	3,677	.5148
	26,009	9,225	5,300	.5454
	20,574	7,325	6,567	.5159
	28,955	12,470	6,583	.5118
	32,714	11,410	9,438	.5032
	22,660	11,820	6,623	.515
		12,505	4,362	.5056
		9,358	9,179	.5011

# ROSIN

Highest Annual Production—2,500,000 bbls. in 1908-09  
Highest Price—\$7.142 per bbl. in 1919  
Lowest Price—76.7c in 1932

	Production U. S.— (000 omitted) bbls.	Consumption Receipts (bbls.)	Stocks End of Crop Yr. Jack. Sav. & Pens. (bbls.)	Price Grade I 100-lb. bbl. Savannah
1928-29	1,865	1,214,228	100,722	\$3.286
1929-30	2,081	1,396,436	149,232	2.395
1930-31	2,000	1,319,022	266,056	1.633
1931-32	1,665	1,182,780	347,591	1.159
1932-33	1,498	865,733	237,350	1.478
1933-34	1,631	1,009,402	142,574	1.983
1934-35	1,665	974,922	259,391	1.914
1935-36	1,647	976,223	156,291	2.384
1936-37	1,632	872,752	109,057	3.442
1937-38	1,725	779,508	139,444	2.058
1938-39	1,778	971,784	609,502	2.262
1939-40	1,282	517,041	544,281	1.918
Jan.		11,630	605,046	2.345
Feb.		6,764	570,403	2.38
Mar.		7,710	544,281	2.395
Apr.		26,679	522,133	2.153
May		37,792	516,741	1.978
June		43,411	529,416	1.735
July		46,132	519,556	1.392
Aug.		48,389	524,212	1.679
Sept.		40,190	522,181	1.581
Oct.		39,820	528,065	1.674
Nov.		35,018	542,091	1.887
Dec.		37,098	561,241	1.82

# TURPENTINE

Highest Annual Production—715,000 bbls. in 1912-13  
Highest Price—\$2.27 per gal. in 1920  
Lowest Price—13¼c in 1938

	Production U. S. (000 omitted) bbls.	Consumption Receipts (bbls.)	Stocks End of Crop Yr. Jack. Sav. & Pens. (bbls.)	Price Crop Year per gal. Sav- annah
	560	343,130	48,396	\$ .451
	625	391,894	40,068	.429
	600	385,093	45,232	.339
	500	328,099	73,640	.328
	450	224,313	63,679	.3314
	450	258,208	46,010	.3873
	500	257,679	88,501	.4127
	510	233,110	114,789	.377
	490	205,421	76,986	.325
	518	206,613	56,349	.2415
	534	219,154	109,626	.1746
	385	124,686	58,369	.2074
		1,487	76,664	.2411
		611	66,532	.2714
		1,202	58,369	.2541
		6,584	51,215	.2292
		9,429	50,704	.217
		11,302	53,345	.2021
		12,340	54,488	.2073
		11,496	55,809	.2252
		9,762	51,053	.2482
		8,364	44,961	.2911
		7,793	44,488	.3249
		6,986	40,016	.3104

## SILK

Highest Annual Imports—661,611 bales in 1929  
 Highest Price—\$17.85 per lb. in 1920  
 Lowest Price—\$1.115 in 1934

	Production Imports (bales)	Consumption Deliveries (bales)	Stocks Storage at N. Y. (bales)	Price Spot, per lb. N. Y.
1929	661,611	619,747	90,772	\$5.078
1930	549,884	582,226	58,430	3.637
1931	605,919	594,889	69,460	2.54
1932	547,195	553,818	62,837	1.601
1933	503,376	469,727	96,786	1.636
1934	430,854	461,706	65,934	1.313
1935	486,150	497,143	54,941	1.641
1936	444,113	454,640	44,444	1.779
1937	430,420	425,299	49,535	1.875
1938	415,537	411,794	53,278	1.7065
1939	385,763	383,431	55,610	2.729
1940	329,505	312,867	...	2.786
Jan.	33,121	29,506	59,225	3.718
Feb.	13,566	22,485	50,306	3.079
Mar.	17,266	21,685	45,887	2.956
Apr.	18,551	21,740	42,698	2.681
May	19,584	18,997	43,285	2.773
June	15,844	17,307	41,822	2.729
July	24,155	22,766	43,211	2.548
Aug.	33,876	30,189	46,898	2.529
Sept.	26,384	28,828	44,454	2.562
Oct.	43,720	39,877	48,297	2.701
Nov.	48,407	36,374	60,330	2.589
Dec.	35,031	23,113	72,248	2.562

## RAYON

Highest Annual Production—391,200,000 (estimated) in 1940  
 Highest Price—\$7.75 per lb. in 1919  
 Lowest Price—42c per lb. in 1932

	Production (pounds—000 omitted)	Consumption Deliveries (pounds—000 omitted)	Stocks (pounds—000 omitted)	Price 300— Den. lb. N. Y.
1929	...	...	...	...
1930	...	...	...	...
1931	...	...	...	...
1932	...	...	...	...
1933	...	...	...	...
1934	...	...	...	...
1935	...	...	...	...
1936	...	...	...	...
1937	...	...	...	...
1938	...	...	...	...
1939	...	...	...	...
1940	...	...	...	...
Jan.	...	...	...	...
Feb.	...	...	...	...
Mar.	...	...	...	...
Apr.	...	...	...	...
May	...	...	...	...
June	...	...	...	...
July	...	...	...	...
Aug.	...	...	...	...
Sept.	...	...	...	...
Oct.	...	...	...	...
Nov.	...	...	...	...
Dec.	...	...	...	...

## SHELLAC

Highest Annual Imports—38,446,700 pounds  
 in 1923  
 Highest Price—\$1.95 in 1920  
 Lowest Price—7½c in 1932

	Imports (pounds— 000 omitted)	Price T. N. Per Lb.
1934	10,219	\$ .2424
1935	20,054	.1567
1936	15,198	.1479
1937	20,760	.1319
1938	12,553	.1126
1939	27,818	.1265
1940	...	.1552
Jan.	3,172	.2031
Feb.	4,273	.1628
Mar.	2,249	.1642
Apr.	1,704	.1481
May	2,886	.14
June	1,940	.1418
July	3,396	.145
Aug.	3,236	.145
Sept.	2,313	.145
Oct.	1,228	.1415
Nov.	...	.1565
Dec.	...	.1694

## SOYA BEAN OIL, Crude

Highest Annual Production—449,806,623 pounds in 1939  
 Highest Price—13.9c in 1926  
 Lowest—3.5c in 1932

	Production (pounds)	Consumption (pounds)	Stocks end of period (pounds)	price per lb.
1929	11,008,743	20,793,293	12,577,179	\$ .1179
1930	14,387,460	17,599,109	12,283,984	.0948
1931	39,149,653	35,481,786	13,635,137	.0599
1932	39,445,464	26,186,284	12,633,199	.0369
1933	26,532,955	24,730,273	10,806,705	.058
1934	35,365,815	21,671,608	14,311,712	.065
1935	105,056,204	100,882,342	20,329,276	.0905
1936	225,297,183	202,545,283	21,268,843	.0827
1937	194,411,398	158,087,703	44,890,307	.0908
1938	323,342,588	276,600,265	49,576,906	.0631
1939	449,806,623	390,162,115	43,928,813	.0551
1940	...	...	...	.0543
1940	Quarterly Figures			
Jan.	...	...	...	.06
Feb.	155,468,263	126,307,551	54,305,010	.0603
Mar.	...	...	...	.0621
Apr.	...	...	...	.0613
May	121,873,616	114,707,456	41,863,279	.0603
June	...	...	...	.0538
July	...	...	...	.0513
Aug.	103,450,872	95,487,622	37,468,972	.0481
Sept.	...	...	...	.0463
Oct.	...	...	...	.0463
Nov.	...	...	...	.0495
Dec.	...	...	...	.0528

## SULPHITE PULP

Highest Annual Production—2,170,000 tons in 1937  
 Highest Price—\$14.00 in 1920  
 Lowest Price—\$1.75 in 1932  
 (Record back only to 1934)

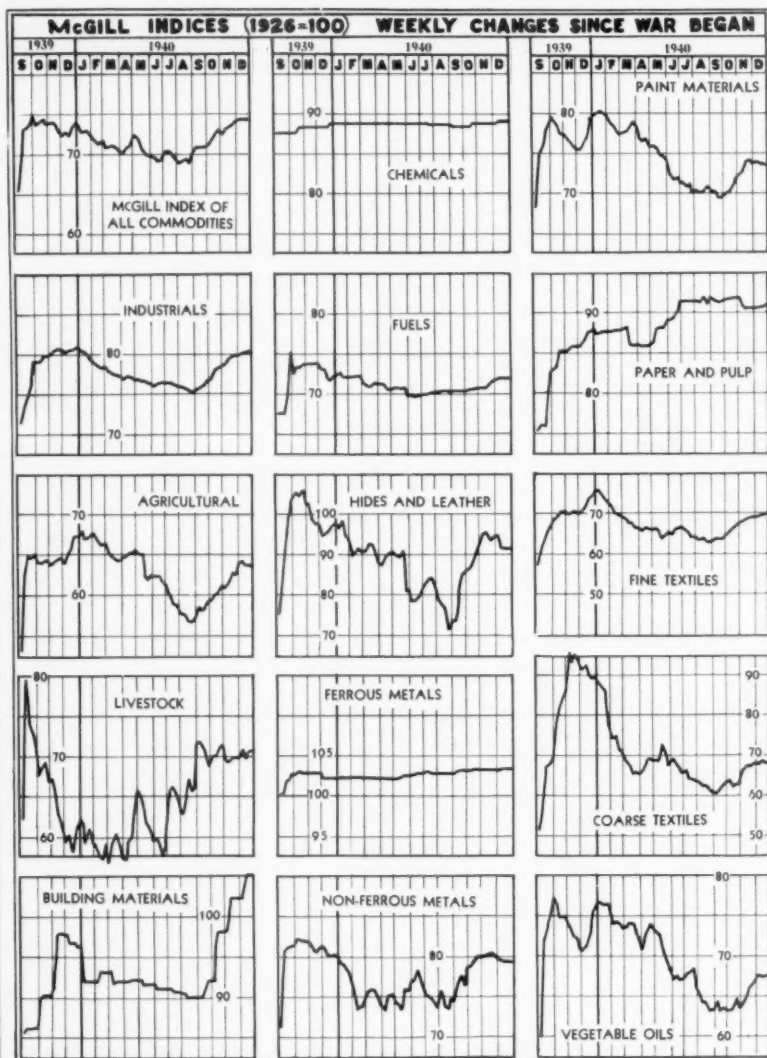
	Production (short tons)	Consumption (short tons)	Stocks at Mills (short tons)	Price Bleached Sul- phite, cwt.
1934	1,446,044	1,418,070	63,097	\$2.85
1935	1,579,567	1,595,783	46,881	2.668
1936	1,821,842	1,822,534	46,189	2.90
1937	2,170,000	2,099,407	116,782	3.791
1938	1,649,930	1,674,507	92,205	3.008
1939	1,969,760	1,983,107	77,600	2.582
1940	...	...	...	3.642
Jan.	213,700	202,700	88,500	3.14
Feb.	198,100	200,300	86,300	3.20
Mar.	214,000	206,300	94,000	3.20
Apr.	212,300	224,600	81,800	3.213
May	231,600	235,200	78,200	3.60
June	227,500	226,000	79,700	3.906
July	221,600	235,400	65,900	4.113
Aug.	227,671	220,200	71,100	3.963
Sept.	202,000	203,700	69,300	3.815
Oct.	220,200	...	...	3.80
Nov.	...	...	...	3.80
Dec.	...	...	...	3.80

## SULPHATE PULP

Highest Production—2,952,909 tons in 1939  
 Highest—\$8.00 in 1920  
 Lowest Price—\$1.25 in 1932, 1938, and 1939  
 (Record back only 1934)

	Production tons	Consumption tons	Stocks end of yr.	Price kraft domes. cwt.
1934	1,246,269	1,132,540	7,457	\$2.091
1935	1,467,749	1,468,967	6,239	1.952
1936	1,794,734	1,795,483	5,490	1.893
1937	2,184,500	2,168,690	21,300	2.652
1938	2,295,934	2,280,506	36,728	1.995
1939	2,952,909	2,971,550	17,500	1.601
1940	...	...	...	2.753
Jan.	310,000	311,000	16,500	1.922
Feb.	280,400	279,100	17,800	2.0187
Mar.	284,500	285,500	16,900	2.1875
Apr.	299,500	299,400	17,000	2.1875
May	335,700	334,400	18,400	2.75
June	327,100	331,600	13,900	3.15
July	322,500	324,100	12,400	3.425
Aug.	329,400	318,500	24,000	3.285
Sept.	309,000	301,500	31,400	3.0937
Oct.	341,900	...	...	3.0625
Nov.	...	...	...	3.0625
Dec.	...	...	...	3.0625

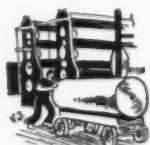




### WOOL

Highest Production—454,000,000 (estimated) in 1940  
 Highest Price—\$1.75 per lb. in 1920  
 Lowest Price—28c per lb. in 1932

	Production Total Shorn and Pulled— lbs. (000 omitted)	Consumption Apparel, pounds (000 omitted)	Stocks Apparel pounds (000 omitted)	Price Clothing, per lb. Boston
1934	430,829	167,600	169,999	\$ .7355
1935	430,700	303,893	113,337	.6425
1936	426,527	278,088	129,204	.8316
1937	432,809	248,227	118,115	.8836
1938	436,510	219,565	115,655	.5907
1939	441,897	293,083	109,533	.7229
1940	454,000 (estimate)			.8399
Jan.		28,189		.9238
Feb.		21,302		.84
Mar.		17,709	98,860	.776
Apr.		17,471		.765
May		17,065		.775
June		19,373	128,585	.785
July		28,431		.7688
Aug.		24,799		.781
Sept.		28,609	127,423	.8338
Oct.		39,240		.9163
Nov.		33,821		.9588
Dec.				.955



### WHEAT

Highest Annual production—1,008,637,000 bu. in 1915  
 Highest Price—\$2.00 in 1925  
 Lowest Price—45c in 1932

	Production (bushels) (000 omitted)	Stocks Jan. 1 U. S. Vis. (000 omitted)	Price #2 Hard per bu.
1929	823,217	138,743	\$1.234
1930	886,470	175,518	.9595
1931	936,831	189,264	.669
1932	756,927	212,329	.535
1933	551,683	162,971	.75
1934	526,393	124,692	.987
1935	626,344	81,329	1.06
1936	626,766	70,307	1.14
1937	875,676	57,310	1.242
1938	931,702	86,863	.8015
1939	751,435	114,672	.7833
1940			.9245
Jan.		117,275	1.055
Feb.		106,736	
Mar.		99,150	1.058
Apr.		95,605	1.098
May		98,119	1.048
June		93,847	.82
July		85,496	.7638
Aug.		146,294	.7458
Sept.		166,460	.8066
Oct.		170,341	.8475
Nov.		165,010	.9058
Dec.	816,698 (est.)	156,108	.9025
Jan. 1, 1941		146,815	

### SHEEP

Largest Number on Farms—54,473,000 on Jan. 1, 1940  
 Highest Price—\$15.90 per cwt. in 1918  
 Lowest Price—\$1.35 in 1931

	No. on Farms Jan. 1 (000 omitted)	Inspected Slaughter (000 omitted)	Price per cwt.
1929	48,381	14,023	\$6.27
1930	51,565	16,697	3.977
1931	53,233	18,071	2.59
1932	53,974	17,899	2.095
1933	53,075	17,354	2.289
1934	53,713	16,055	2.789
1935	52,245	17,644	3.632
1936	52,022	17,216	4.056
1937	52,489	17,270	4.692
1938	52,682	18,060	3.559
1939	53,783	17,241	3.892
1940			4.004
Jan.	54,473	1,598	4.389
Feb.		1,313	4.844
Mar.		1,266	5.305
Apr.		1,355	4.808
May			3.693
June		1,378	3.843
July		1,489	2.976
Aug.		1,469	3.045
Sept.		1,469	3.469
Oct.		1,734	3.706
Nov.			3.943
Dec.			4.024

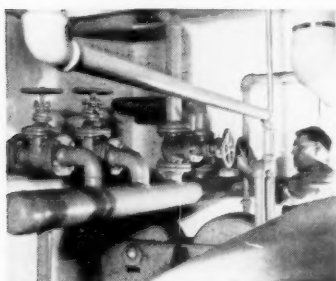
Final statistics for the year are not available on all commodities at the time of going to press with this issue. Supplementary data for completing these reference tables will be published in the February issue of **PURCHASING**. Basic data for this section have been compiled by the McGill Commodity Service, Auburndale, Mass. Individual commodity series have been selected for their significance in the general industrial market situation. Items on which supply and prices have been relatively stable are not shown in detail. These tabulations cover principal commodities which have affected the course of commodity markets.



↑ One of the main steam header valves in the system referred to.



↑ Illustrating **READING-PRATT & CADY** valves on the Refinite Water Softening system referred to in this advertisement.



↑ Valves in the condenser system—part of the complete installation mentioned in this advertisement.

# Engineers

## SIMPLIFIED THE VALVE PROBLEM HERE

A recently installed plant called for valves on the main water supply, for water softeners, to handle boiler feed water, on steam lines, on condenser lines, for the air-conditioning plant, and so forth—services that operate under widely different temperatures, pressures and other conditions.

The engineers asked for—and accepted—recommendations from **READING-PRATT & CADY** and the plant is performing today up to the exacting specifications originally laid down for it.

**READING-PRATT & CADY'S** experience since 1878 might be very helpful to you, too. Write us, won't you, when you want to discuss valves—or for any information on valves.

**READING-PRATT & CADY**  
DIVISION • READING, PENNSYLVANIA  
AMERICAN CHAIN & CABLE COMPANY, INC.

# Among the ASSOCIATIONS

## N.A.P.A. CONVENTION COMMITTEE

The Twenty-sixth Annual Convention of the National Association of Purchasing Agents will be held in Chicago, May 26 through 29, 1941. Headquarters will be at the Stevens Hotel. Chicago is an

excellent convention city from every standpoint — centrally located, good hotels, adequate meeting rooms and Inform-A-Show facilities, representative industries, and all the advantages of a large and progressive modern metropolis. The Chicago Association is richly endowed with leadership and experienced

in the planning and conduct of a successful convention. The memorable gatherings of 1920 and 1930 were held in that city, and the coming convention promises to set new records for an enjoyable and profitable meeting, cordial in spirit, serious and professional in its approach to the purchasing problems of the day, ranking high in the calibre and authority of its program, and efficient in the handling of detail.

The convention committee has been selected and is already at work. Approximately a hundred members of the Chicago Association are serving, under the leadership of the following chairmen:

**General Chairman:** Walter H. Hallstein of Ilg Electric Ventilating Co.

**Co-Chairman:** H. L. Brueggemann of Acme Steel Co., F. J. Heaslip of Fairbanks Morse & Co., and A. V. Pleasance of Montgomery Ward Co.

**Inform-A-Show:** Henry C. Bauer of Revere Copper & Brass, Inc.

**Program:** John P. Sanger of United States Gypsum Co.

**Treasurer:** Harry H. Wise of Scovill Mfg. Co.

**Purchasing Agent:** Roy F. Stiles of Stewart-Warner Corp.

**Secretary:** Lawrence R. Seen of Borg & Beck Div.; Borg-Warner Corp.

**Automobiles:** R. D. Barnes of Bauer & Black Div., The Kendall Co.

**Entertainment (General):** Arthur G. Pearson of National Broadcasting Co.

**Entertainment (Ladies):** Ray W. Morrill of Bowman Dairy Co.

**Golf:** T. H. Tredwell of W. C. Ritchie & Co.

**Hotels:** Thomas H. Willard of Marshall Keigl, Trustee.

**Plant Visitation:** Paul E. Shaw of The C. F. Pease Co.

**Publicity:** W. J. Auburn of The Gerard Co., Inc.

**Reception:** Thomas J. Anderson of Acme Steel Co.

**Registration:** Harry W. Knight of Village of Winnetka.

**Service:** Carl L. Otremba of Montgomery Ward Co.

**Transportation:** Edgar L. Van Vechten of United Air Lines Transport Corp.

**Ushers:** Walter Armstrong of American National Bank & Trust Company of Chicago.

## NEW OFFICERS AT HAMILTON

The following officers for 1941 were elected at the December meeting of the *Hamilton Association*: **President**, George A. Ireland of National Paper Goods, Ltd.; **Vice-Presidents**: J. Frank Walker of Frost Steel & Wire Co., Ltd., and O. D. Southwick of National Steel Car

**Unusual Set-up for "ACORN" DIES**

This "Acorn" Die is finish-threading a special aeronautical valve of stainless steel. The  $\frac{1}{2}$ " - 20 Speed "Acorn" Die have to be lapped so as to produce smooth, perfect threads within extremely close tolerances, right to the shoulder.

If you need fast threading, accurate threading or super-accurate threading, you need to know more about "Acorn" Dies. Any "G.T.D. Greenfield" Engineer is qualified to answer your most searching questions.

**GREENFIELD TAP & DIE CORP.**  
Greenfield, Massachusetts  
Detroit Plant: 2102 West Fort St.  
Warehouses in New York, Chicago, Los Angeles and San Francisco.  
Greenfield Tap & Die Corp. of Canada, Ltd., Galt, Ont.

**GTD GREENFIELD**  
TAPS • DIES • GAGES • TWIST DRILLS • REAMERS • SCREW PLATES • PIPE TOOLS

When writing Greenfield Tap & Die Corp. please mention *Purchasing*



# *Cans*

## TO HOLD THE BOUNTY OF A NATION

A few years ago only the few could afford vegetables out of season. Today vegetables in sanitary tin cans bring their healthful vitamins the year 'round to every family in the land, at trifling cost.

Every year America uses *ten billion* tin cans, which make it possible to save and distribute 300 million dollars worth of food and other perishables for the benefit of the public.

America is more healthful with these vegetables added to its winter diet, farmers have millions in extra income, food prices are lower -- all because of cans.

And this is only *one* use of steel. Our transportation, homes, clothing, amusements, national defense -- everything depends on steel for its material or on steel machinery for its construction. And steel, in turn, depends on *men* to make it right. Here at Youngstown we are constantly making improvements to keep our mills as modern as science can develop. But all the equipment in the world can't equal *men* in the making of fine steels. We are proud of our workmen who are spending their lives making the finest TIN PLATE that skill and care can produce.

Tin Plate - Sheets - Plates - Pipe and Tubular  
Products - Conduit - Bars - Rods - Wire - Nails -  
The Plates and Spikes

25-22C



# THE YOUNGSTOWN SHEET AND TUBE COMPANY

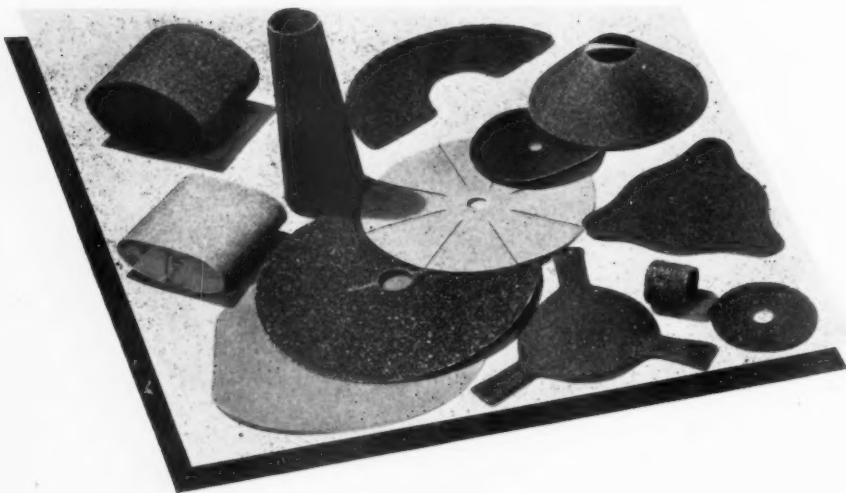
Manufacturers of Carbon and Alloy Steels

General Offices

YOUNGSTOWN, OHIO

# COATED ABRASIVES

## In Special Shapes and Sizes



### ... 48 HOUR ACTION!

Don't think you have to wait... and wait... because your finishing operations require a special size or shape or grit. AP is geared up to give you 48-hour action no matter how complicated your needs may be. The minute your rush order arrives at our factory, the AP special production schedule starts moving swiftly. In less than 48 hours your shipment is on its way!

Typical of AP service that includes an Engineering Staff to give your problems individual attention without obligation — a special container, "Masterpak," to protect your sandpaper shipments from rough handling and bad weather — and products so good they're guaranteed to boost your production, or no bill sent. Specify AP on your next abrasive order, and learn what Service really is!

### FREE TRIAL

Order a ream or a 50 yard roll of the coated abrasive that meets your needs. Use up to half. If it doesn't boost your production, return the balance and no bill will be sent. Abrasive Products, Inc., 523 Pearl Street, South Braintree, Massachusetts.



Corp., Ltd.; *Secretary*, J. H. Burkholder of Dominion Foundries & Steel, Ltd.; *Treasurer*, R. O. Geddie of Hamilton Facing Mill Co., Ltd.; *National Director*, C. R. McNeil of Fuller Brush Co., Ltd.; *Executive Committee*, P. A. Walker of Canadian Westinghouse Co., Ltd., John L. Maw of B. Greening Wire Co., Ltd., H. B. Coleman of Canada Machinery Corp., Ltd., G. W. Henderson of Steel Company of Canada, Ltd., and D. R. Elwood of Lime & Alabastine, Canada, Ltd.; *Canadian Council*, C. R. McNeil, and A. C. Kay of Firestone Tire & Rubber Co. of Canada, Ltd.

### CAROLINAS-VIRGINIA ASSOCIATION AWARD TO HABERKERN



The Carolinas-Virginia Purchasing Agents Association this year established the Thomas Award "To provide a graceful acknowledgment of outstanding contributions and meritorious service, to encourage individual enterprise, and stimulate more active thinking for the advancement of our profession." At the Association's quarterly meeting in Charlotte last month, the first annual award was made to R. C. Haberkern of the R. J. Reynolds Tobacco Co., Winston-Salem, in recognition of his leadership as Association President during the past year, the most successful in the organization's twenty years of existence. The trophy consists of a heavy sterling silver plaque, embossed in gold, bearing the names of the nine charter members. Mr. Haberkern's name is engraved in the first of ten panels, as the 1940 recipient. At the conclusion of a ten-year period, the plaque will be permanently awarded to a member of the group selected by a judging committee as having made the most outstanding contribution to the Association and to purchasing over that period. A certificate of award was also issued to Mr. Haberkern.

In making the presentation, W. G. Thomas, charter member whose name the trophy bears, traced the steady growth of the Association in size, value and influence, from its modest origin in 1920. He stated that the giving of the trophy is purely symbolic, with the intent

*When writing Abrasive Products, Inc. please mention Purchasing*

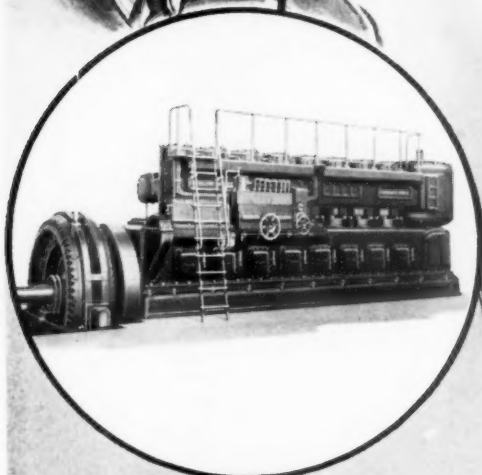
# ONE CALL DOES IT ALL!



Fairbanks-Morse branches with warehouses, located throughout the United States and Canada, simplify getting what you want *when* you want it.

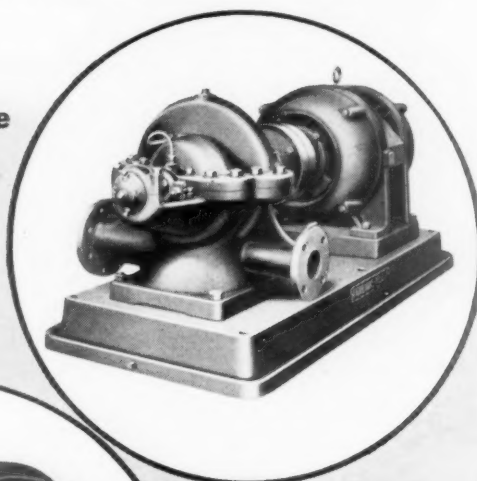
Fairbanks-Morse centralized responsibility, proved by more than a hundred years of continuous service to practically every type of industrial operation, simplifies purchasing, *protects the purchaser*, and insures getting *what* you want.

And when it is pumping, power, or weighing equipment — *one call does it all*. Fairbanks, Morse & Co., 600 South Michigan Avenue, Chicago, Illinois.



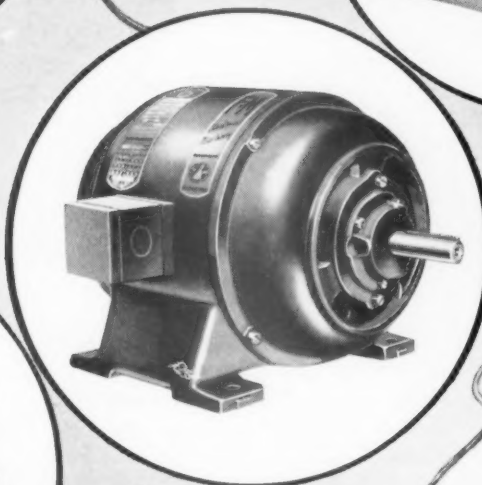
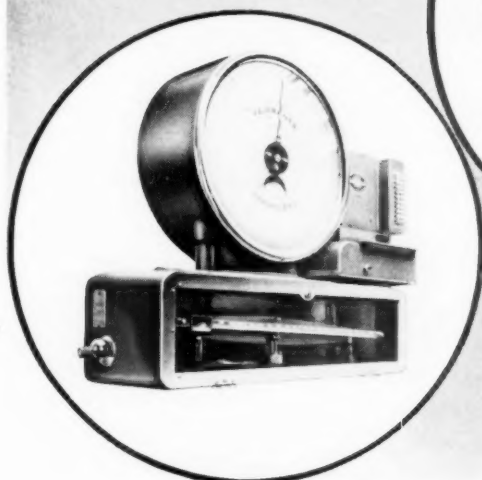
## Fairbanks-Morse PUMPS

1 1/2 g.p.m. to  
150,000 g.p.m.



## Fairbanks-Morse DIESELS

5 to 1400 h.p.



## Fairbanks-Morse MOTORS

1/4 h.p. to  
10,000 h.p.

## Fairbanks-Morse SCALES

.002 oz. to 1 million pounds.



7905-EOPSA40.11

# FAIRBANKS-MORSE

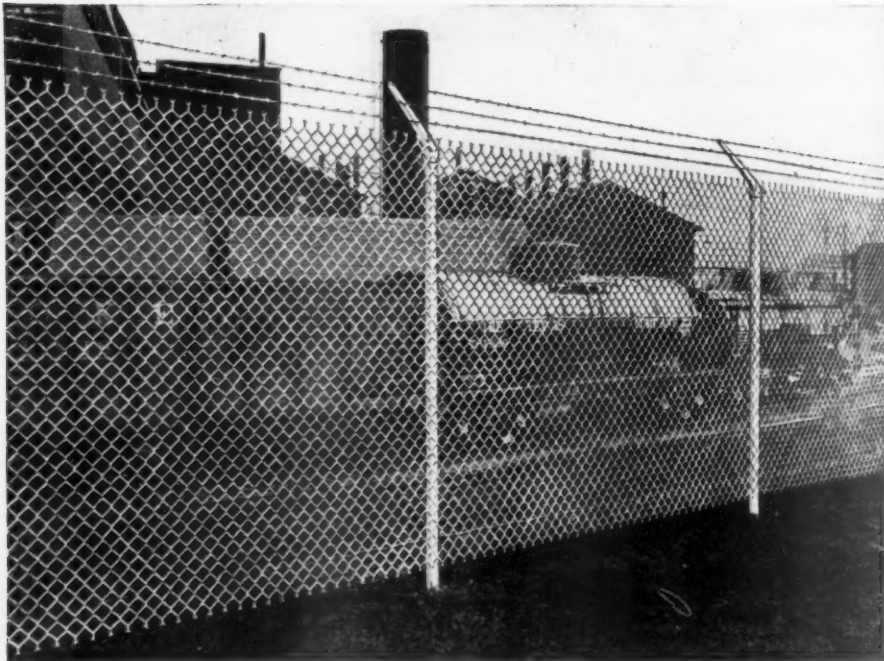
POWER, PUMPING, AND WEIGHING EQUIPMENT



When writing Fairbanks, Morse & Co. please mention Purchasing



## Is Your Plant Sufficiently PROTECTED to Handle DEFENSE ORDERS?



### ANCHOR FENCE PROTECTS . . . Both Inside and Outside of Your Plant Against Saboteurs, Spies

**I**F YOU are handling Government Defense orders—or expect to—it's time to make certain that your plant, property and personnel are adequately protected against sabotage. It's time to raise a "Wall of Steel" around your plant—to keep out saboteurs and spies intent on destroying or hindering your Government Contract Work. That's Rule No. 1 of sabotage prevention. Rule No. 2 is to raise similar barriers *inside* your plant property, around your power plant, transformer stations, chemical storage, fuel supply and other vulnerable points

so that they can only be reached by carefully selected employees. Remember there *may* be potential saboteurs on your payroll right now!

#### Send for the Anchor Engineer

He'll show you how to guard your property and employees against both *outside* and *inside* saboteurs with a minimum of expense for guards and policing. He'll give you the benefit of Anchor's long experience in fence protection. He'll explain how Anchor Fence *can be moved and reinstalled in case of plant expansion.*



AN ANCHOR ENGINEER will gladly help you plan complete protection for your plant. Write or wire today to the: ANCHOR POST FENCE CO., 6615 Eastern Ave., Baltimore, Md.

*When writing Anchor Post Fence Co. please mention Purchasing*

to give recognition and express appreciation of a personal contribution to advancement in the field of procurement which may often offer possibilities beyond appraisal. He said, "The trophy is but a symbol and reward that should come to men who unselfishly give of their time, their thought, their energy and their spirit to promote the interests of the purchasing profession."

#### NEW OFFICERS OF CONNECTICUT P. A. ASSOCIATION

The following officers for 1941 have been elected by the *Connecticut Association*: *President*, L. D. Muldoon of Jenkins Bros., Bridgeport; *Vice-Presidents*, H. W. Schwartz of Robertson Paper Box Co., Montville, and J. C. Andrews of American Hardware Corp., New Britain; *Secretary*, F. A. Neumann of New Haven Clock Co., New Haven; *Treasurer*, J. P. Camp of Phoenix Mutual Life Insurance Co., Hartford; *National Director*, R. C. Swanton of Winchester Repeating Arms Co., New Haven; *Directors*, F. J. Karolshak of H. L. Judd Co., Wallingford; H. M. Greist, Jr. of Greist Mfg. Co., New Haven, C. V. Chapin of Bristol Brass Co., Bristol, E. W. Couch of Lea Mfg. Co., Bridgeport, R. W. Scott of U. S. Aluminum Co., Fairfield, P. F. Jerome of Connecticut Power Co., New London, F. G. Space of Seymour Mfg. Co., Seymour, and W. B. Joyner of London & Lancashire Indemnity Co. of America, Hartford.

#### NIAGARA PENINSULA BUYERS ELECT NEW OFFICERS

The *Niagara Peninsula Branch Purchasing Agents Association* of Hamilton District has chosen the following officers for 1941: *Chairman*, Horace Cluderay of United Steel Corp., Ltd., Welland; *Vice-Chairman*, John A. Joyce of Alliance Paper Mills, Ltd., Merritton; *Treasurer*, Stewart J. Walters of Canada Foundries & Forgings, Ltd., Welland; *Executive Committee*, C. H. Randall of Canadian Atlas Steels, Ltd., Welland, H. H. Mansfield of Jos. Stokes Rubber Co., Ltd., Welland, J. Williamson of Yale & Towne Mfg. Co., St. Catharines, J. R. Hamilton of Dominion Chain Co., Ltd., Niagara Falls, C. H. Strasser of Norton Company of Canada, Ltd., Keyth C. Reece of Canadian Carborundum Co., Ltd., Niagara Falls, and J. G. Sexton of McKinnon Columbus Chain Co., Ltd., St. Catharines.

#### DECEMBER 2

**HOUSTON**—Luncheon meeting of the *Houston Association*, at the Rice Hotel. Speaker: Capt. E. T. Dawson of the State Game Department, "Texas Game Laws." Capt. Dawson outlined the three-fold program of conservation, restoration and education, which the department is promoting.

#### DECEMBER 3

**HUNTINGTON**—Dinner meeting of the *Tri-State Association*, at the Pritchard Hotel. Speaker: John S. Wood,

# TOPS IN TURNING POWER



## "VULCAN SUPERIOR" TONGS

When you want to turn, or hold, pipe or fittings—here's the answer. A single tong that handles BOTH—without adjustment or change of a single part. Yes, the "V" recessed jaw provides a slip-proof grip that guarantees a leak-free joint, or starts a "frozen" thread without marring the fitting. Made in seven sizes—with Jaws that reverse to provide extra service life—for pipe and fittings, 1/8 to 12 inches.

## WILLIAMS' "SUPERECTOR"

When you want real "turning power" for big nuts—hex or square—the "Superector" is your answer. This powerful reversible-ratchet wrench will turn just about anything with threads on it. Socket holes extend clear thru so you can tighten a nut all the way down on any length of bolt. Made in five sizes, 24 to 53"—all with Quadruple Pawls and drop-forged handle for extra strength. Both Hex and Square Sockets—1 to 4-5/8".

1-593

*Sold by industrial distributors everywhere. Literature on request.*

J. H. WILLIAMS &amp; CO.

HEADQUARTERS FOR

225 LAFAYETTE ST., NEW YORK



*When writing J. H. Williams & Co. please mention Purchasing*



*Completely Cold Forged*  
**FIBRO FORGED**  
*Socket Screws*

Every one of the new features which characterize FIBRO FORGED Socket Screws is the result of a clear understanding on the part of Holo-Krome Engineers and Metallurgists as to the present day needs of Socket Screw Users.

The patented method by which FIBRO FORGED Screws are made—Completely Cold Forged with continuous unbroken fibres—is the first major advancement in the manufacture of Socket Screws to meet the demand of modern increased production and high speed machinery.

New Lustrous Black Finish—an outstanding characteristic of Holo-Krome FIBRO FORGED Screws—the Quality Socket Screws meeting industry's demand for a superior finish.

Holo-Krome steadfastly adheres to their policy of constant research to give Socket Screw Users the greatest possible value.

**HOLO - KROME Guarantees  
UNFAILING PERFORMANCE**



*When writing The Holo-Krome Screw Corp. please mention Purchasing*

Jr., of Washington, D. C., government supervisor inspector, "Application of the Fair Labor Standards Act."

**OAKLAND**—Luncheon meeting of the East Bay Group, Northern California Association, at the Lake Merritt Hotel. Speaker: Harold Gray, engineer for the Mosquito Abatement District and Bay Sewage Survey, "The East Bay Sewage Disposal Situation."

**DECEMBER 5**

**OAKLAND**—Plant visit of the Northern California Association, at the General Metals Corp., followed by dinner meeting at the Oakland Airport Inn, where a sound slide film was presented by the Founders' Society.

**FORT WAYNE**—Dinner meeting of the Fort Wayne Association, at the Chamber of Commerce. Speaker: Charles A. Boss of Centreville, Mich., former District Vice-President of the N.A.P.A., "An Explanation of the Haney Business Chart."

**NEW ORLEANS**—Train tour of industrial plants along the Mississippi River front, by the New Orleans Association, in conjunction with other business groups and sponsored by the industrial bureaus of the Young Men's Business Club. The trip was climaxed by an inspection of the Johns Manville Co. plant at Marrero, with a luncheon meeting addressed by C. J. Flanagan, assistant district manager for the company.

**DECEMBER 6**

**EASTON**—Annual dinner dance of the Lehigh Valley Association, at the Hotel Easton. T. C. Neil of Allentown was general chairman of the committee.

**DECEMBER 6-7**

**CHARLOTTE, N. C.**—Annual meeting of the Carolinas-Virginia Association, at the Hotel Charlotte.

**Friday Afternoon**

Reports: "The Current Situation on Commodities." Coal, by H. D. Waters; Lumber, by D. S. Burnside; Non-Ferrous Metals, by J. J. Preisinger; Steel, by I. M. Lynn; Textiles, by C. H. Dry; Industrial Chemicals, by C. F. Williams; Paper and Shipping Containers, by W. G. Terry.

Open forum and round table discussion on purchasing problems, led by R. C. Haberkern of the R. J. Reynolds Tobacco Co., Winston-Salem, N. C., President of the Association.

**Banquet**

Speaker: Dr. Julian S. Miller, Editor of *The Charlotte Observer*.

**Saturday Morning**

Business meeting.

Presiding officer: O. G. Sawyer of Duke University, Durham, N. C.

Address: "Election's Over; So What?" by J. W. Knowlton of Charlotte, Association Economist.

Discussion, led by J. J. Barnhardt of Cannon Mills, Kannapolis, N. C.



Address: "Importance of Relations with Salesmen," by George A. Howell of Rock Hill Printing and Finishing Co., Rock Hill, S. C.

Discussion, led by E. T. Taylor of North Carolina Finishing Co., Salisbury, N. C.

Address: "Should the Marketers of Industrial Goods Advertise to Purchasing Agents?" by W. Z. Betts of North Carolina State Highway and Public Works Commission, Raleigh.

Discussion, led by J. M. Geer of Marshall Field & Co., Spray, N. C.

The following officers were elected for 1941: *President*, George C. Eichorn of Vick Chemical Co., Greensboro; *Vice-President*, I. M. Lynn of the Lynchburg Foundry Co.; *Secretary-Treasurer*, R. V. Spangler of Mill-Power Supply Co., Charlotte; *National Director*, R. C. Haberkern of R. J. Reynolds Tobacco Co., Winston-Salem. Mr. Haberkern, retiring President of the Association, was presented with the Thomas Award, given annually for outstanding contributions and meritorious service during the year.

#### Entertainment

Football game Saturday afternoon, at the Legion Memorial Stadium: Annual North-South Carolina High School Championship. The facilities of the Charlotte Country Club course were also available for golfers.

#### Committee

The committee in charge of arrangements included W. G. Thomas, David Lindsay, C. E. Beatty, and S. Frank Jones.

#### DECEMBER 7

**TULSA**—Annual President's - Ladies Night dinner dance of the *Tulsa Association*, at the Tulsa Club.

#### DECEMBER 9

**TOLEDO**—Plant inspection trip of the *Toledo Association*, at the Unicast Corp.

**PORTLAND**—Dinner meeting of the *Oregon Association*, at the Mallory Hotel. This was the second in a series of study meetings based on the N.A.P.A. Handbook of Purchasing Policies and Procedure. The following topics were discussed:

"What do we mean by 'general purchasing policies?' Who should set them up and by whom should they be changed? Led by Clare L. Bay of General Electric Co.

What are some of the factors going toward the making up of buying policies, and to what extent are they taken into consideration in the average purchasing department? Led by Victor Marchi of General Paint Corp., and George W. Williams of the Wiggins Co.

How and to what extent should general business conditions affect the purchasing policy? Present-day business conditions, and their effect on buying policy. Led by Austin W. Angell of Northwestern Electric Co.

Is purchase from outside sources or manufacture for your own use the



## FORD MOTOR COMPANY CHOOSES YALE CABLE KING HOISTS.

Along the banks of the River Rouge is the world's largest industrial plant—that of the Ford Motor Company, outstanding example of American efficiency. Here, from continually moving assembly lines come Ford and Mercury motor cars.

Along these assembly lines the Ford Motor Company uses Yale Cable King Wire Rope Electric Hoists for hoisting jobs.

Manufacturers in every line of business have found that Cable Kings do hoisting jobs faster, better, more economically. They have found that they can depend on the speed and efficiency of air-cooled Cable Kings.

Have you a hoisting operation that needs an ever-ready, dependable electric hoist? Then you'll want to investigate the Yale Cable King. Get in touch with your distributor today. Or write to us for full information.

Capacities  $\frac{1}{4}$  to 6 tons.

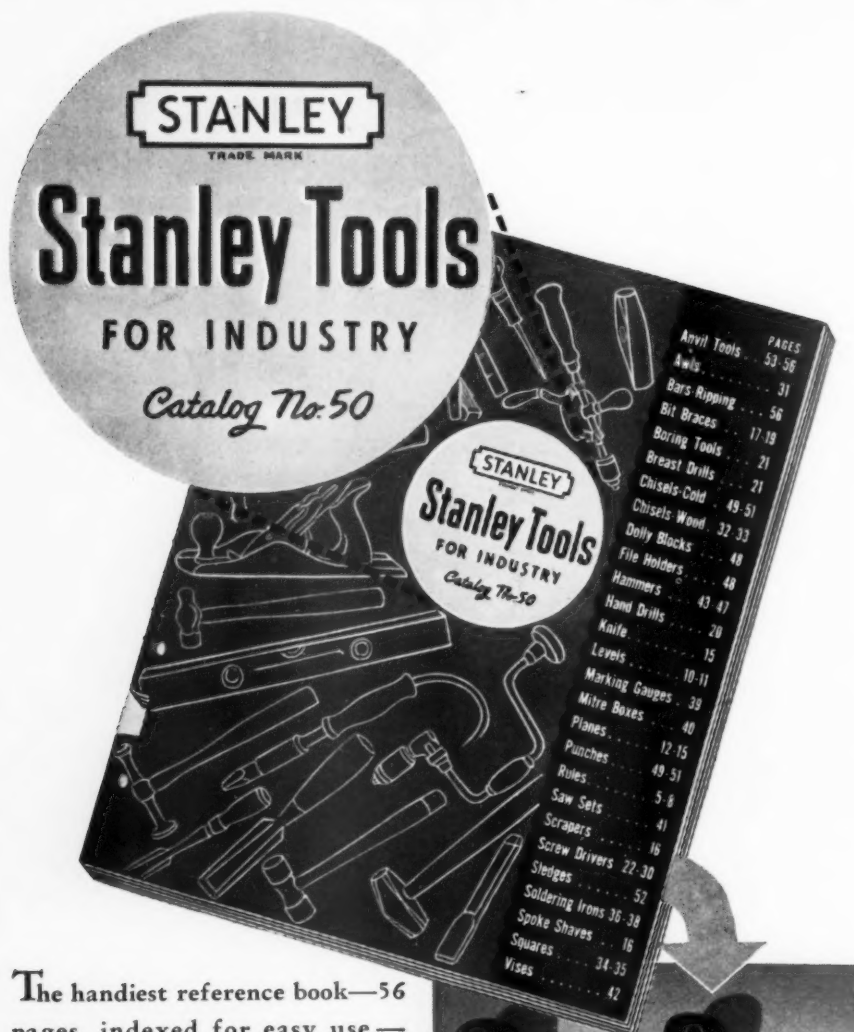


**THE YALE & TOWNE MFG. CO.**

PHILADELPHIA DIVISION, PHILADELPHIA, PA., U. S. A.  
IN CANADA: ST. CATHARINES, ONT.

**YALE**

Makers of Yale Hand Chain Hoists, Electric Hoists, Electric Industrial Trucks, Hand Lift Trucks and Skid Platforms.



The handiest reference book—56 pages, indexed for easy use—showing industrial hand tools. Send for a copy of Catalog No. 50 and use it as your guide in buying.

### STANLEY SCREW DRIVERS

Typical of the completeness of each classification of Stanley Tools are Screw Drivers. Shown here are a few of over 200 different screw drivers and bits described in this new catalog. Included is a full line of drivers for "Phillips" Recessed Head Screws and Bolts. Your local distributor will gladly supply Stanley Tools to meet your production and maintenance needs.



## STANLEY TOOLS

DIVISION OF THE STANLEY WORKS

168 Elm Street, NEW BRITAIN, CONN.

THE TOOL BOX OF THE WORLD

soundest policy? Led by E. R. Schmitt of Schmitt Steel Co.

Is reciprocal buying a bugaboo of the purchasing department, and to what extent is it practiced? Led by Virgil Cowen of Stubbs Electric Co.

What do most companies do about personal purchases for employees, and how can they be controlled? Led by Harold F. Llewellyn of Portland Bolt & Mfg. Co.

**COLUMBUS**—Dinner meeting of the *Columbus Association*, at the University Club. Speaker: John Corrodi, Assistant General Manager of the Curtiss-Wright Columbus plant, who spoke on the production plans of his company and their effect on Columbus industry and personnel.

**HOUSTON**—Luncheon meeting of the *Houston Association*, at the Rice Hotel. Sound motion picture, "Two Related Industries," showing the manufacture of felts for the paper industry. Walter Glass of F. C. Huyck & Sons Co., supervised the showing of his company's film.

#### DECEMBER 10

**MILWAUKEE**—Dinner meeting of the *Milwaukee Association*, at the Elks Club. Speakers: Attorney Clifford Randall, "The Legal Phases of Purchasing"; and Prof. Lee E. Lawrence of the University of Wisconsin, "Recent International Developments and Their Effect on the United States." The meeting was preceded by a commodity forum.

**NEW YORK**—Annual Christmas party of the *Metropolitan Purchasers' Assistants Club*, at Midston House. Dinner, entertainment, motion pictures, prizes. R. Beaudine of the Dairymen's League Co-operative Assn. was chairman of the committee in charge.

**ST. LOUIS**—Dinner meeting of the *St. Louis Association*, at the Hotel Statler, sponsoring the St. Louis Field Conference of Babson's Reports, Inc. Speakers: Arthur C. Babson, "The General Business Outlook"; E. Lafayette Quirin, "The Outlook for Commodity Prices and Sales"; and H. Clyde Baldwin, "The Outlook for Stocks and Bonds."

The following officers were elected for 1941: *President*, George H. Brown of Century Electric Co.; *Vice-Presidents*, Irving C. Peppel of General Metal Products Co., and B. J. Jostrand of Larkin Packer Co.; *Secretary*, Paul O'Brien of Frank Adam Electric Co.; *Treasurer*, R. J. Brockman of Sefton Fibre Can Co.; *National Director*, Herbert DeStaeble of the Lambert Pharmacal Co.; *Executive Committee*, J. J. Sharkey of Western Cartridge Co., D. K. Howell, Jr., of Lincoln Engineering Co., and Fred Wieseman of Fred Medart Mfg. Co.

**OAKLAND**—Luncheon meeting of the *East Bay Group, Northern California Association*, at the Lake Merritt Hotel.

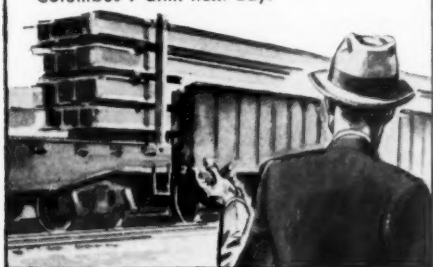
When writing The Stanley Works please mention Purchasing

**JUST AN OLD  
SCULLY CUSTOM...**  
*filling orders promptly!*



**CHICAGO:** Rush order from railroad received at 4:20 p.m. — we delivered goods at freight house 5:15 p.m. the same day.

**CLEVELAND:** Order for beams cut to special lengths received 5 p.m.; delivered in Columbus 9 a.m. next day.



**ST. LOUIS:** Rush order for 12,000 lbs. miscellaneous material — some of which had to be cut — received at 2:15 p.m. Loaded on customer's truck at 4:00 p.m.



**PITTSBURGH:** Bridge job delayed at critical point by lack of four plates — we cut them and delivered in fifty minutes.



**ST. PAUL:** Emergency order received after closing. Shipment delivered in Fargo, N.D., next morning.



**NEWARK:** Order for 1½ tons of beams received late afternoon — shipped by fast freight; and delivered next morning.



**BALTIMORE:** Order received 4:30 p.m. for steel to repair breakdown — delivery made at 6:25 p.m.



**BOSTON:** Emergency call received on holiday afternoon. Goods delivered early next morning.



**F**AST, friendly service is the rule at each of the eight Scully warehouses—whether your order is large or small. That's what has made the Scully name famous. We have huge stocks on hand, ready for immediate delivery. And our warehouses are located in the great manufacturing centers—an-

other reason why we can get your orders to you in such a hurry. So now—when quick delivery is so important whether or not you are working on defense business — give us a trial. Call Scully — for steel, steel products, copper or brass. Phone, wire or write the warehouse nearest you.

*Send for the Scully Stock List and Reference Book—it's free.*

## SCULLY STEEL PRODUCTS COMPANY

*Distributors of Steel,  
Steel Products, Copper and Brass*

Warehouses at **CHICAGO**  
**ST. PAUL - MINNEAPOLIS**  
**NEWARK, N.J.**

*The Mark of Quality*



**CLEVELAND • PITTSBURGH**  
**BOSTON • BALTIMORE**  
**ST. LOUIS**

*The Mark of Service*

**UNITED  
STATES  
STEEL**

*When writing Scully Steel Products Company please mention Purchasing*





## I'm the Symbol of Acco Men



People usually think of me as the trade-mark of American Chain & Cable Company, Inc. But I'm more than that, for I'm the symbol of men who produce 137 essential products.

You can't pilot an airplane, operate a railroad, build a dam or bridge—you can't work a mine, drill an oil well, log a forest—you can't drive a car or truck, operate an elevator, sail a ship or run a service station without using the kind of products I and my associates make.

I am a composite of melters, rollers, metallurgists, chemists, engineers, formers, mechanics, fabricators, machinists, operators, researchers, inspectors, testers, sales representatives, and so on. We know our jobs—some of us learned as apprentices 50 years ago, and now we coach the younger men. Others of us came out of "tech" schools. . . . Below are listed some of the essential things we make for INDUSTRY, AGRICULTURE and TRANSPORTATION.

**CHAIN**—Weed Tire Chains  
Welded & Weldless Chain & Attachments  
**AMERICAN CHAIN DIVISION**

**CABLE**—Tru-Lay Preformed Wire Rope  
Crescent Non-preformed Wire Rope  
Tru-Loc Fittings—Tru-Lay Control Cables  
**AMERICAN CABLE DIVISION**

**BRAKES**—Tru-Stop Brakes for Trucks & Buses  
**AMERICAN CABLE DIVISION**

**CUTTING MACHINES**—Wet Abrasive  
Cutting Machines—Nibbling Machines  
**ANDREW C. CAMPBELL DIVISION**

**CHAIN BLOCKS**—Trolleys, Presses  
**FORD CHAIN BLOCK DIVISION**

**WIRE ROPE**—Lay-Set Preformed Wire Rope  
Nonpareil Non-preformed Wire Rope  
"Koradless" (Stainless Steel) Yacht Rigging  
Aircraft Control Cables  
**HAZARD WIRE ROPE DIVISION**

**AUTOMOTIVE EQUIPMENT**—for  
garages and service stations  
**MANLEY MANUFACTURING DIVISION**

**SPRINGS**—Owen Springs and Units for Mat-  
tresses, Furniture and Transportation Seating  
**OWEN SILENT SPRING COMPANY, INC.**

**FENCE**—Page Fence, Wire and Rod Products,  
Welding Wire, Shaped Wire  
**PAGE STEEL AND WIRE DIVISION**

**VALVES**—Bronze, Iron and Steel—Steel  
Fittings • d Este Engineering Specialties  
**READING-PRATT & CADDY DIVISION**

**CASTINGS**—Malleable Iron Castings  
**AMERICAN CHAIN DIVISION**  
Electric Steel Castings  
**READING STEEL CASTING DIVISION**

**HOISTS and CRANES**—Wright Chain  
Hoists, Electric Hoists, Cranes, Presses  
**WRIGHT MANUFACTURING DIVISION**

In Canada—Dominion Chain Company, Limited • In England—The Parsons Chain Company, Ltd., and British Wire Products, Ltd.

**AMERICAN CHAIN & CABLE COMPANY, Inc.**  
BRIDGEPORT • CONNECTICUT

When writing American Chain & Cable Company, Inc. please mention Purchasing

Speaker: Capt. Stanley Place, 159th Infantry, National Guard of California, "The Garand Rifle."

**TROY**—Dinner meeting of the *Eastern New York Association*, at the Hotel Troy. The first of a new series of program features was presented, a talk by George Fuller on "How the New York Power & Light Co. Buys," followed by general discussion. A colored sound motion picture, "Steel—Man's Servant," was shown through courtesy of the Carnegie-Illinois Steel Corp.

**AKRON**—Ladies' Night dinner dance of the *Akron Association*, at the City Club. The committee in charge consisted of L. A. Murphy (Chairman), F. J. Karg and W. B. Moon.

### DECEMBER 11

**KANSAS CITY**—Dinner meeting of the *Kansas City Association*, at the Kansas City Club. Speaker: Tom Collins. Officers for 1941 were elected as follows: *President*, J. E. Bowes of Skelly Oil Co.; *Vice-Presidents*, C. O. Kimball of Kornbrodt Kornice Co., and R. A. Graves; *Secretary*, R. C. Hopkins, City Purchasing Agent; *Treasurer*, R. K. Ward; *National Director*, J. M. Culver of Columbian Steel Tank Co.

**MINNEAPOLIS**—Annual Christmas party of the *Twin City Association*, at the Hotel Radisson.

**SPRINGFIELD, OHIO**—Dinner meeting of the *Springfield Association*, at the Shawnee Hotel. Motion picture of operations in the Crowell-Collier's plant, one of the largest printing establishments in the country, with explanatory comment by Philip Schneider. Round table discussion of business conditions.

**ELKHART**—Ladies' Night and Christmas party of the *South Bend Association*, at the Hotel Elkhart. Speaker: John Moore, "Through a Porthole."

### DECEMBER 12

**BIRMINGHAM**—Luncheon meeting of the *Birmingham Association*, at the Redmont Hotel. Report of the District Council meeting, by George Cole.

**SAN FRANCISCO**—Luncheon meeting of the *Northern California Association*, at the Palace Hotel. Speaker: Eugene Frickstad of the California Ink Co., "Manufacture of Printing Inks and Dry Colors."

**SEATTLE**—Dinner meeting of the *Washington Association*, at the New Washington Hotel. Speaker: Dr. Frank J. Clancy, prominent Seattle physician, who spoke on "A Special Message to Purchasing Agents."

**CHICAGO**—Dinner meeting of the *Chicago Association*, at the Hotel Sherman, attended by approximately 750 members and sales executives. Feature of the program was a four-act drama-



## ARISTOLOY STEELS

*made in a plant designed for  
the efficient production of alloy steels*

**Steels:** S.A.E. ALLOY STEELS; OXIDATION and CORROSION  
RESISTING STEELS; TOOL and SPECIAL STEELS;  
AIRCRAFT QUALITY STEELS; STAINLESS STEELS

**Forms:** BLOOMS; BILLETS; BARS

**Finishes:** HOT ROLLED; MACHINE STRAIGHTENED; TURNED

**Conditions:** AS ROLLED; HEAT TREATED; ANNEALED;  
SPHEROIDIZED ANNEALED; TEMPERED



**COPPERWELD STEEL COMPANY WARREN, OHIO**

**ARISTOLOY** S.A.E. ALLOY BILLETS AND BARS; OXIDATION AND CORROSION  
RESISTING STEELS; TOOL AND SPECIAL STEELS; AIRCRAFT QUALITY STEELS; STAINLESS STEELS

*When writing Copperweld Steel Company please mention Purchasing*



## THE INDUSTRIAL FLOORING THAT CAN TAKE IT

*Carey  
Elastite*

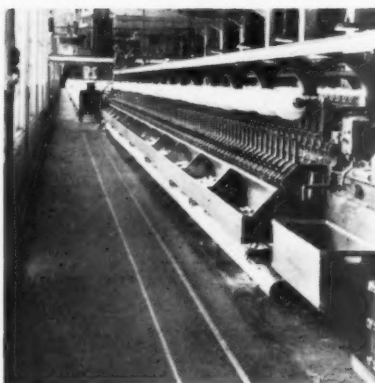
### ASPHALT TILE

**T**HIS improved flooring, a development of CAREY research, is tougher, longer wearing—a flooring that can take a beating from wheeled traffic and yet that is resilient and comfortable for workmen. It reduces accidents and steps-up efficiency. Withstands highly compressive loads and rough usage.

An ideal material for factory, warehouse and machine shop floors; loading platforms; offices; laboratories; stores. It is fire-safe, moisture and weather resistant. Also specified for protection of built-up roofs subjected to traffic—makes them valuable for use as sun decks or recreational activities.

CAREY ELASTITE Asphalt Tile is a compound of asphalt and mineral filler, reinforced with asbestos fibres, densely compressed and die cut to size. Available in black and red colors in  $\frac{1}{2}$ " thickness, and in sizes 12" x 12" and 12" x 24".

This modern tile helps to reduce accidents, lower maintenance, save time, improve appearance, promote cleanliness. Specify it for new construction and for resurfacing rough or worn floors.



● Maverick Mills, East Boston, Mass.



● Hava-tampa Cigar Factory, Tampa, Florida

Write today for catalog and samples—  
address Dept. 68

**THE PHILIP CAREY COMPANY • Lockland, Cincinnati, Ohio**

Dependable Products Since 1873

IN CANADA: THE PHILIP CAREY COMPANY, LTD. Office and Factory: LENNOXVILLE, P. Q.

● Receiving-shipping department, Hennegan Co., Cincinnati, Ohio.

tization of "The Purchasing-Sales Function," with scenario by Stuart F. Heinritz, Editor of *PURCHASING*, and dialogue by Prof. Alvin C. Busse of New York University. The cast included Helen Carney; Walter Armstrong of American National Bank & Trust Co. of Chicago (Purchasing); Earl Cornelius of L. C. Smith & Corona Typewriters (Sales); N. W. Dorr of Illinois Tool Works (Sales); Jack Laing of Remington Rand, Inc. (Sales); V. K. Church of Horder's, Inc. (Sales); Ernest Dahl of Tallman, Robbins & Co. (Sales); Ernest Johnson of Illinois Tool Works (Sales); George Stack of International Tag & Salesbook Co. (Purchasing); Jack Chronic of National Broadcasting Co.; R. J. Iverson of Nutrine Candy Co. (Purchasing); John Randall of Remington Rand, Inc. (Sales); Roy Kessler of Tallman, Robbins & Co. (Sales); Robert A. Doyle of The Glidden Co. (Purchasing); Judson Cross of Bonnar-Vawter Fanform Co. (Sales); John Johnson of Walter H. Johnson Candy Co. (Purchasing); Thomas Hulton of International Business Machines Corp. (Sales); Gordon Lindquist of Illinois Tool Works (Sales). Arthur G. Pearson, Purchasing Agent of the National Broadcasting Co., gave a commentary between the acts. Charles C. Urquhart of the National Broadcasting Co., produced and coached the performance.

#### DECEMBER 13

**SAN FRANCISCO**—Ninth Annual Christmas party sponsored by the "XPA Association" of the *Northern California Association*, at the Hotel St. Francis.

**TORONTO**—Annual Christmas party of the *Toronto Association*, at the Royal York Hotel. John H. Crossingham of Acme Carbon & Ribbon Co., Ltd., was chairman of the committee in charge.

**PORTLAND**—Luncheon meeting of the *Oregon Association*, at the Mallory Hotel. Colored motion pictures shown by Merle L. Tobias, "Oregon, My Native State."

**SALT LAKE CITY**—Christmas party and dinner meeting of the *Utah Association*, at the Newhouse Hotel. S. W. Mote, Association President, was in charge of the program. Three new members were admitted at this meeting: Jack Jolley of Freightways Mfg. Co., Vere Wiesley of Rocky Mountain Packing Corp., and Gordon Burt Affleck of the L. D. S. Church Board of Education.

#### DECEMBER 14

**ST. LOUIS**—Annual Christmas Party of the *St. Louis Association*, in the Gold Room, Hotel Jefferson. Dinner, dancing, and gifts. E. H. Kansteiner of the Sligo Iron Store Co. was chairman of the committee on arrangements.

**CHICAGO**—Eighteenth annual Christmas party of the *Chicago Association*, at the Hotel Sherman, with program specially arranged for the children. The

When writing The Philip Carey Company please mention Purchasing





# TIMKEN TUBES RYERSON SERVICE

Smaller than "mill shipment orders" of TIMKEN Mechanical Tubing are quickly available.

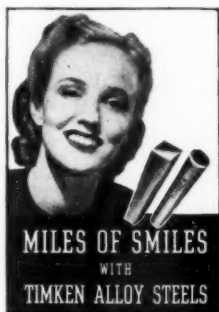
Immediate delivery can be made from local stocks of JOSEPH T. RYERSON & SON, INC., at Boston, Jersey City, Philadelphia, Buffalo, Cincinnati, Chicago, St. Louis, Cleveland, Detroit and Milwaukee.

Call your nearest Ryerson warehouse for quick service at all times.

THE TIMKEN ROLLER BEARING COMPANY, CANTON, OHIO  
Steel and Tube Division

## TIMKEN SEAMLESS STEEL TUBES

Manufacturers of TIMKEN Tapered Roller Bearings for automobiles, motor trucks, railroad cars and locomotives and all kinds of industrial machinery; TIMKEN Alloy Steel and Carbon and Alloy Seamless Tubing; and TIMKEN Rock Bits.



*When writing The Timken Roller Bearing Company please mention Purchasing*

committee in charge included Thomas R. Willard, W. L. Selle, Roy Carlson, and J. P. Franks.

**NEWINGTON, CONN.**—Stag Christmas party of the *Connecticut Association*, at the Indian Hill Country Club. Dinner, floor show, and gift bags. Walter B. Joyner of the London & Lancashire Indemnity Company of America was in charge of arrangements.

**CINCINNATI** — Annual Christmas party and dinner dance of the *Cincinnati Association*, at the Hotel Gibson. Ed C. Frederick of the Frederick Steel Co. was chairman of the committee in charge.

**BRIDGEPORT** — Thirteenth annual Christmas party of the *Salesmen and Purchasing Agents Association*, at the Stratfield Hotel. The program was featured by a stage show and prize raffle.

#### DECEMBER 16

**BOSTON**—Christmas meeting of the *New England Association*, at the Hotel Statler. Dinner, entertainment, and gifts. The committee in charge included Ed Fitzgerald (Chairman), Leo Cotton, Albert Devers, Ray Howland, Jim Kelty, Ray Murray, Bill Richards, Austin Seacor, George Taylor, and Bill Wickham.

**HOUSTON**—Luncheon meeting of the *Houston Association*, at the Rice Hotel.

Christmas party and Ladies' Day program. Speaker: Dr. Charles L. King, Pastor of the First Presbyterian Church.

#### DECEMBER 17

**TULSA**—Annual meeting of the *Tulsa Association*. Speaker: Roger Inman, pilot for the O.C.S. Mfg. Co., Coffeyville, Kansas, who told of his recent personal experiences and observations in England. The following officers were elected for 1941: *President*, J. S. Hawley of Stanolind Oil & Gas Co.; *Vice-Presidents*, C. G. McLaren of Shell Oil Co., and J. H. Wolfe of British-American Oil Producing Co.; *Secretary-Treasurer*, R. R. Burris of Sun Oil Co.; *National Director*, H. E. Kaiser of Phillips Petroleum Co.; *Executive Secretary*, H. M. Cosgrove, *Assistant Secretary*, E. K. Welch.

**MONTREAL**—Annual "Ladies' Night" meeting of the *Montreal Association*, at the Mount Royal Hotel.

**NEW YORK**—Annual Christmas party of the *New York Association*, at the Builders Exchange Club.

**PITTSBURGH** — Annual Christmas party and dinner dance of the *Pittsburgh Association*, at the Pittsburgh Athletic Association. J. H. Lammert was chairman of the committee in charge.

**LOUISVILLE**—Annual Christmas party of the *Louisville Association*, at the Kentucky Hotel. W. M. Kerrick of the Mengel Company was chairman of the committee on arrangements.

#### DECEMBER 18

**ROCHESTER**—Annual Christmas party of the *Rochester Association*, at the Rochester Club. Bert Bayer of F. L. Heughes & Co. was chairman of the committee in charge.

**ELMIRA**—Christmas party of the *Elmira Association*, at the Mark Twain Hotel. The committee included Sydney Jones (Chairman), Redge Potter and Larry Clark.

**CANTON**—Ladies' Night dinner dance of the *Canton & Eastern Ohio Association*, at the Onesto Hotel. E. H. Benson was in charge of the arrangements.

**CLEVELAND**—Special meeting of the *Cleveland Association*, at the Allerton Hotel, for consideration of the new constitution.

#### DECEMBER 19

**SYRACUSE**—Annual Christmas party of the *Syracuse & Central New York Association*, at the Onondaga Hotel.

**TOLEDO**—Annual Christmas party of the *Toledo Association*, at the Toledo Club. Dinner, dancing, cards, and entertainment.

**INDIANAPOLIS** — Annual Christmas party of the *Indianapolis Association*, at



Where would your business be without printing? It couldn't function. Your printer is performing a great service for you and for all industry. But he can do more, if you will let him. He can improve the forms you are now using. If you consult him in advance of producing a job, he can save you money by telling which size, weight and grade of paper to use for greatest efficiency; how to save money on engraving and production costs; in short, how to get the best possible printed results at lowest cost.

#### THREE SURE WAYS TO GET THE MOST FOR YOUR MONEY

##### Consult Your Printer

Your printer knows the three elements of printing: type, ink, and paper. Use his knowledge to your advantage.

##### Specify Nationally Known Paper

Nationally known and accepted, NEENAH papers are guaranteed to give better production both in the press-room and the office.

##### Don't Skimp on Quality

Buying *quality* paper and printing pays dividends in the long run. Increase smoothness of operation in office and create customer goodwill.

**NEENAH PAPER COMPANY, Neenah, Wis.**



*Manufacturers of Fine Ray Content Bonds, Ledgers, Index and Lightweights*

*When writing Neenah Paper Company please mention Purchasing*

# Happy New Year - 1816



TO THE young Swiss watchmaker, 1816 was a happy new year.

Dissatisfied with prospects in his native Switzerland, he had struck out for America 16 years before. Now, as he eyed his shiny new shingle, he felt proud—proud of the America that had given him the opportunity he sought.

He was cheerful...despite dark days, for the War of 1812 had left the legacy of every war—bad times. His own faith unshaken, the young watchmaker nailed up his sign and went to work.

Since then, we, the Company he founded, have kept his faith through some 15 depressions and 4 wars. To-day, we roll up our sleeves once more—again to share in the defense of the Nation.

Smiling, we bend to the task—knowing full well that this is not the first threat to our liberty...nor will it be the first to have shattered itself against the free will of a free people.

Knowing, as the watchmaker knew, that in the freedom of her people lies America's shield and strength, and our guarantee of a happy new year... forever.

*Peter A. FRASSE and Co., Inc.*

1816-1941 125<sup>th</sup> ANNIVERSARY





the Columbia Club, with more than 350 members and guests in attendance. Roy Katterhenry was chairman of the gift committee.

**DETROIT**—Dinner meeting of the *Detroit Association*, at Webster Hall. Speaker: Hon. George E. Bushnell, Chief Justice of the Supreme Court, State of Michigan.

**BIRMINGHAM**—Annual Christmas party, banquet and dance of the *Birmingham Association*, at the Birmingham Country Club. The committee in charge consisted of Lee Allen Brooks (Chairman), Le Grand Wilson, Henry B. Gray, Jr., Marcus McClellan, and Allen Rushton.

#### DECEMBER 20

**WORCESTER**—Annual Christmas party of the *Worcester County Association*, at Putnam & Thurston's. Frank Colesworthy was master of ceremonies, and the committee in charge comprised J. Carroll, S. Heath, S. Reando, A. Cencak, and H. Gilson.

**PORTLAND**—Annual Christmas party and buffet luncheon of the *Oregon Association*, at the Mallory Hotel. Gifts donated for the occasion were turned over to the Portland Toy and Joy Makers. General chairman was Ray A. Collins of the Collins Concrete & Steel Pipe Co.

**VANCOUVER**—Annual Christmas party and Ladies' Night of the *British Columbia Association*, at the Panorama Roof Garden of the New Vancouver Hotel. The committee in charge included W. H. Ball, E. B. Barreau, T. W. Bourns, R. A. Baker, R. C. Girling, Wm. Letham, Gene Morrow, and Adam Taylor.

#### DECEMBER 21

**WINNIPEG**—Annual Christmas party of the *Winnipeg Association*, at Moore's.

#### DECEMBER 23

**SAN FRANCISCO**—Seventeenth annual family Christmas dinner and party of the *Northern California Association*, at the Hotel St. Francis. Lon Cheyney was chairman of the committee in charge.

1 1 1

#### NORTH AMERICAN AVIATION OPENS PURCHASING OFFICE AT DALLAS

The North American Aviation Co. has set up a purchasing department at Dallas, Texas, pending completion of its new seven million dollar airplane factory at Hensley Field. Robert Monroe, Purchasing Agent at the company's Inglewood, Cal., plant, will also supervise purchases for the Dallas factory. J. W. Hinchcliffe, formerly a buyer at Inglewood, has been named Assistant Purchasing Agent, and will be located at Dallas.

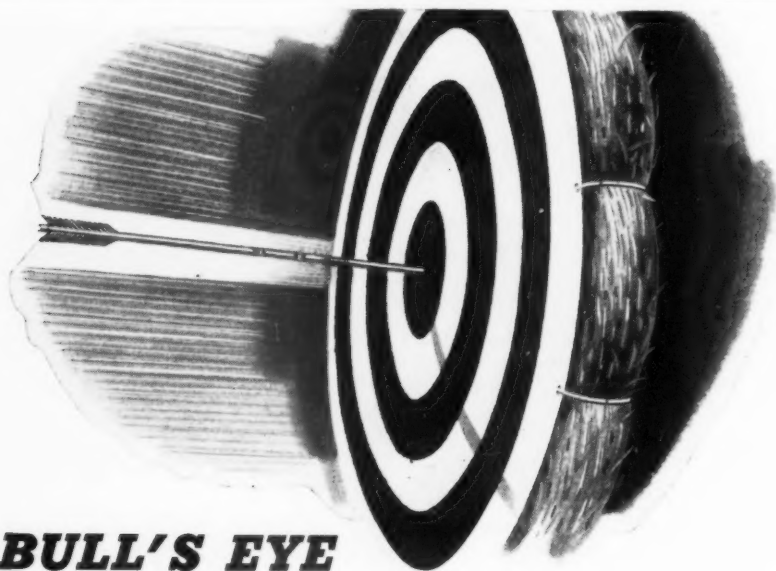
Mr. Monroe has been associated with aircraft company purchasing for more than ten years. He became Assistant Purchasing Agent for Western Air Express in 1929, Assistant Purchasing Agent for Douglas Aircraft Co. in 1934, and Purchasing Agent for North American Aviation, Inc., in 1935. Mr. Hinchcliffe has been on the company's purchasing staff since 1936.

The Dallas purchasing office will buy all material that can be obtained in that area, but general administration of purchases and traffic will be retained at Inglewood. The rapid growth of the company is attested by the purchasing records. In 1936, purchases totaled \$895,000. In 1940 the figure will exceed \$35,000,000.

1 1 1

#### BACK ISSUES WANTED

The Library of Congress, Washington, D. C., has requested several back issues of *PURCHASING* to complete their files of this publication. A number of these are now out of print and are no longer available from this office. The issues desired are: April, May, August, September, October, November and December, 1936; January, February, September, October, November and December, 1937; and December, 1939. Readers who may have any of these issues, and are willing to contribute them to the files at Washington, are asked to communicate with Mr. H. S. Parsons, Chief of the Periodical Division, Library of Congress, Washington, D. C. Their cooperation will be very much appreciated.



## BULL'S EYE

**on the spot you name**

Pre-Planned stainless steel does a lot of things for you. It hits your production plan *dead center*—fits into your schedule without "kinks," lost time or need for continued experimentation. It means easier, speedier fabrication and reduced costs.

If you know stainless steel, you know what an infinitely varied family it is. To select and produce the exact grade whose performance and properties are uniformly

right—both for your fabricating and field conditions—requires the technical background and experienced skill of a pioneer. That's what you're offered in Allegheny Stainless.

These fine steels are produced in every needed form or shape—from fine wire to huge castings. No matter where you're located, the most-used shapes are available in convenient warehouse stocks.

ALLEGHENY LUDLUM STEEL CORPORATION • GENERAL OFFICES: PITTSBURGH, PA.

**ALLEGHENY LUDLUM**  
STAINLESS STEELS PRE-PLANNED  
TO YOUR NEEDS

ALLEGHENY LUDLUM STEEL CORPORATION  
Oliver Building, Pittsburgh, Penna.  
Send me a copy of your new "Handbook of Special Steels"

Name.....  
Street.....  
City..... State..... S-104

When writing Allegheny Ludlum Steel Corporation please mention *Purchasing*

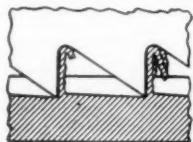
# *The* **ATKINS** **CURLED CHIP** *Tells This Story...*

**HOW 1940's MOST AMAZING DEVELOPMENT IN METAL  
CUTTING IS SPEEDING THE NATIONAL  
DEFENSE PROGRAM FOR '41**

★ Faster metal cutting, as made possible by the Atkins Curled Chip System will step up operating rates and open production bottle necks in 1941. For the essence of Curled Chip Saws is SPEED—getting more metal cut in less time . . . Speed made possible by a new tooth-and-gullet design that removes metal in quickly released coiled shavings instead of broken filings . . . Speed that permits the operation of modern production cutting machines at maximum rates.

Write us—or ask your jobber—for full information on the sensational Atkins Metal Cutting System—symbolized by the "Curled Chip" and including all types of saws for cutting metal—Circular Milling Saws, Segmental Cold Saws and Powersaw Blades.

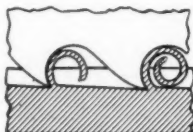
**E. C. ATKINS AND COMPANY**  
446 S. Illinois Street Indianapolis, Indiana



Old Type Tooth

## **Here's Key to Sensational Cutting Rates of Curled Chip Saws**

Conventional tooth removes metal by a "pushing" action—telescopes chips into the gullet in fine pieces—wastes power.



Atkins Curled Chip Tooth

Observe efficient cutting action of Atkins Curled Chip tooth. Chips roll up in the gullet—"explode" like released clocksprings from the end of the cut. No choking of gullet—Instead, a fast crisp cutting action permitting higher speeds, heavier rates of feed and longer tool life.

# **ATKINS**

*Curled Chip System  
of Metal Cutting*

*When writing E. C. Atkins and Company please mention Purchasing*

## PERSONALITIES *in the* NEWS

**L. B. Bonnett**, formerly Purchasing Agent for the Brooklyn Edison Co., has been appointed Vice President in charge of Purchases and Engineering for the Consolidated Edison Company of New York. P. C. Savage, formerly Purchasing Agent, becomes Assistant to the Vice President, and L. K. Murphy ad-

vances from the position of Assistant Purchasing Agent to that of Purchasing Agent for the company.

**W. P. Haskell**, Purchasing Agent for H. P. Hood & Sons, Inc., Lowell, Mass., addressed the Kiwanis Club of that city recently on "Public Relations."



**Harry L. Erlicher**, General Purchasing Agent of the General Electric Company since 1931, was elected a Vice-President of the company at a meeting of the board of directors in New York City last month. He will continue in charge of the company's purchasing activities.

A Schenectady boy, he joined the GE organization as a messenger forty years ago, and shortly thereafter was assigned to the purchasing department at his own request. His aptitude for that work has been attested by a record of steady advancement. He became a buyer in 1910, Assistant Purchasing Agent in 1923, and General Purchasing Agent in 1931 on the retirement of L. G. Banker.

He has been active in the work of the Eastern New York Purchasing Agents Association and in the N.A.P.A., and enjoys an exceptionally wide circle of friends, having the reputation of being able to call more people by their first names than anyone else in the company.

**Eric B. Vesey** has been appointed General Purchasing Agent of General Motors of Canada, Ltd., Oshawa, Ont., succeeding the late Robert J. MacFarlane. Mr. Vesey is a graduate of the University of Toronto in finance and commerce, and has been associated with General Motors since 1927. He became Assistant Purchasing Agent in 1933. From 1937 to 1939 he served as Purchasing Agent for McKinnon Industries at St. Catharines, returning to Oshawa in 1939 to become assistant to Mr. MacFarlane.

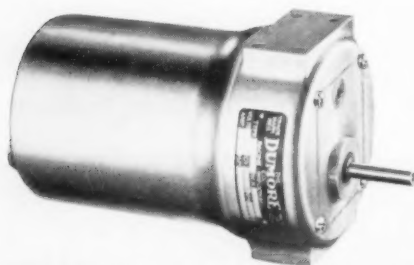
**Harry F. Wagner**, City Purchasing Agent at Cincinnati, and his Bureau of City Tests, were pictured and described in the rotogravure section of the Cincinnati *Enquirer*, December 15th.

**C. A. Ilgenfritz** of the Republic Steel Corp., Cleveland, Charles R. Holton of the Bethlehem Steel Co., Albion Bindley

*that*  
**EXTRA**  
*something*

● Packaged power for business machines, household appliances, electric tools, delicate controls on aircraft or medical devices . . . these represent the range of responsibility entrusted to Dumore motors. The same precision and special features of design that have made "Dumore" the symbol of "extra power hours" also assures extra dependability in control applications where utmost dependability is vital. Regardless of how peculiar your power problem may be, if it involves fractional horse power motors, you stand to gain by taking advantage of Dumore engineering service. Write for brochure: "Speaking of Endurance."

The Dumore Company, Dept. 351-A, Racine, Wis.



**SPECIFICATIONS TYPE E1-Y AIRCRAFT MOTOR**  
Series reversible, 12 or 24 volts D.C.; H.P. range, 1/14 to 1/20 full-load speeds, 1,600 to 200 R.P.M.; watts input, 120; duty, 10-minute; totally enclosed; weight, 3 lbs.; all screws safety-wired. (This motor was designed and built especially for aircraft use.)

**DUMORE  
MOTORS**



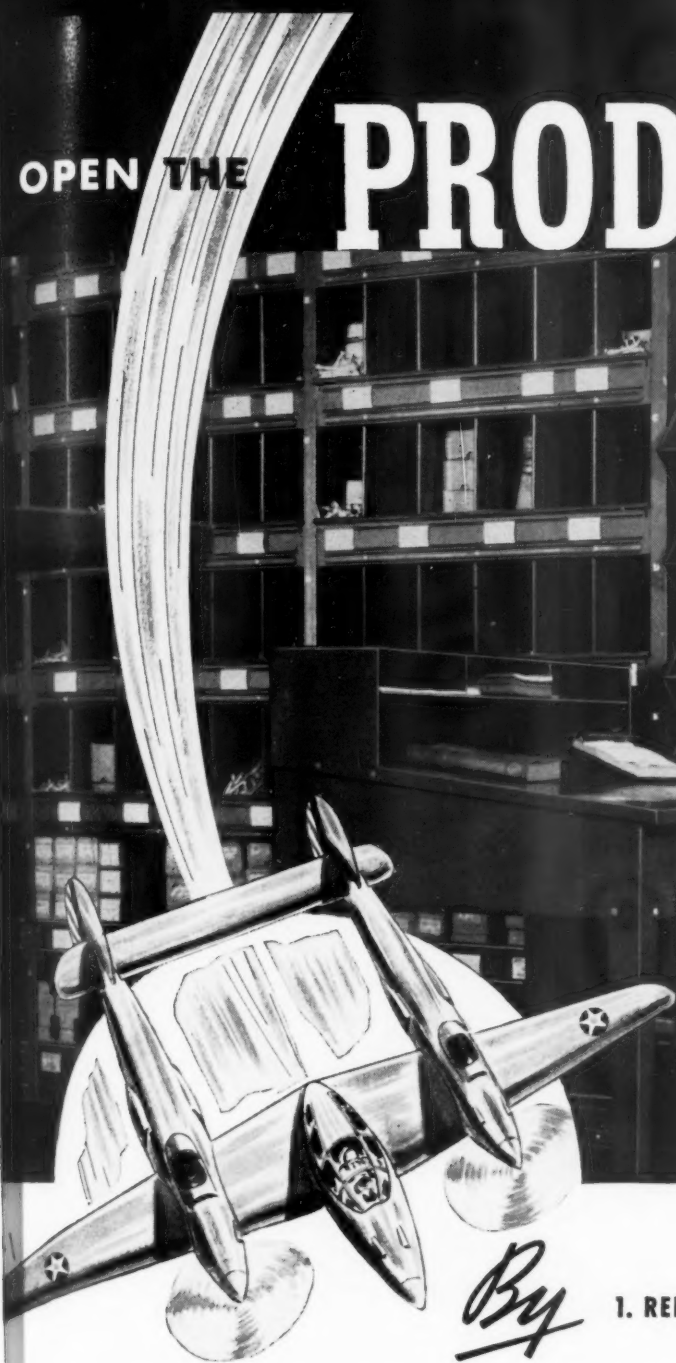
*When writing The Dumore Company please mention Purchasing*



OPEN THE

# PRODUCTION

THROTTLE



*By*

1. RELEASING PRODUCTIVE  
FLOOR SPACE;

2. FASTER HANDLING OF PARTS IN WORK; 3. TOOL CONTROL AND PROTECTION

● This year, in aviation alone, Lyon has helped more than 30 concerns step up output with the above 1-2-3 simple inexpensive formula. One aircraft executive wrote to a production executive of another aircraft concern about Lyon Service and said:

*"The Surveys of the Lyon engineering organization have been of great assistance to us. Their findings relative to floor space savings, reduction of fire hazards, and faster movement of materials throughout*

*our plant have been particularly valuable."*

The results Lyon Surveys and Lyon Equipment have produced for aircraft manufacturers are being duplicated for practically every industry in America. Lyon Steel Shelving, Tool Room and Shop Equipment make possible efficiencies and economies that will surprise you. These improvements are IMMEDIATELY available, to you from stock at our two plants and strategically located warehouses.

**LYON METAL PRODUCTS, INCORPORATED**

General Offices: 3301 Madison Avenue, Aurora, Illinois  
District and Sales Offices in all Major Cities



**CABINETS.** Modern streamlined "Steel-art" design. Suitable for finest executive offices.



**FOLDING CHAIR.** For sales conferences and employee meetings. Comfortable. Sturdy. Fold compactly for storage.



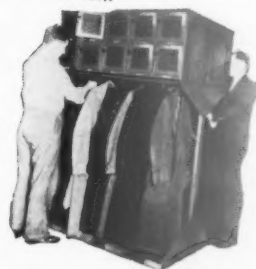
**BENCHES**



**ASSEMBLER'S BENCH BIN.** Speeds assembly—requires only 16" x 9" bench space (Patent Applied for).



**BENCH LEGS.** For steel or wood tops—riveted and welded.



**SHOP ROBE.** Low cost portable clothes storage. (Patent No. 2202427—May 28, 1940).



**BAR RACK.** Safe, accessible storage for bars, rods, etc.

**LYON** *Service*  
STORAGE EQUIPMENT

of the Pittsburgh Steel Co., G. L. Rathel of the Continental Steel Corp., Kokomo, Ind., and H. E. Pape of the Stanley Works, Bridgeport, Conn., were among the purchasing executives participating in a conference on pig iron, steel, and scrap, in collaboration with the National Defense Advisory Commission in Washington last month.

**Arthur I. Miller** has resigned as City Purchasing Agent and secretary of the Board of Contract and Supply, Yonkers, N. Y. City Manager Whitney will supervise purchases temporarily, assisted by Kenneth Browne of the Engineering Bureau.

**C. J. Rogers**, formerly Purchasing Agent and more recently Vice-President and General Manager of the White Pass & Yukon Route, has been elected president of that company, succeeding H. Wheeler, retired. Mr. Rogers was a charter member of the *Washington Association*, served as its president in 1923-1924, and subsequently became Vice-President of the N.A.P.A., representing District No. 1.

**Capt. F. H. Harrison** has been appointed Purchasing Agent for the Province of British Columbia, succeeding the late A. V. Hamilton. Capt. Harrison has been in the governmental service

twenty-three years, and prior to his present appointment was business manager in the Public Works Department at Victoria.

**J. Milton Peterson**, who has been City Purchasing Agent at Moline, Ill., ever since that office was created six years ago, has resigned to become Deputy Collector of Internal Revenue at Moline and Rock Island.

**Joseph L. Ernst**, Purchasing Agent for the Rochester (N.Y.) Board of Education, has been appointed instructor in purchasing at the Rochester Business Institute for the winter term.

**Milton R. Maddux** has resigned as Purchasing Agent of the County of Hamilton, Ohio, to become Purchasing Agent for the Philip Carey Co., Lockland. Mr. Maddux served his purchasing apprenticeship in the industrial field, as a buyer for Procter & Gamble eight years before he went into the public service. He is a past president of the Cincinnati Association, and is at present a member of the N.A.P.A. Executive Committee as Vice-President for District No. 6.

**H. C. Morrow** has been appointed Purchasing Agent and Traffic Manager of the Unit Rig & Equipment Co., Tulsa. Mr. Morrow was formerly Purchasing Agent for the Gulf States Utility Co. at Beaumont, Texas, and for the Simms Oil Co. at Dallas.

**Harry W. Knight**, Purchasing Agent and Finance Director of the Village of Winnetka, Ill., since 1936, has been appointed City Manager at Two Rivers, Wis. Mr. Knight is chairman of the Governmental Purchasers Group of the N.A.P.A.

**Lester A. Lake**, for many years Purchasing Agent for the Spool Cotton Co., New York City, has been appointed merchandising manager for the company. Carl A. Neuer succeeds Mr. Lake as Purchasing Agent.

**W. P. Baerenrodt** has been appointed Treasurer and Purchasing Agent of The A. P. Smith Manufacturing Company, East Orange, N. J., succeeding the late Peter A. Smith.

**Warren W. Loomis**, Purchasing Agent of the Christian Science Publishing Co., Boston, retired from active business last month. He has been continuously engaged in purchasing work for thirty-five years, joining the purchasing department of Stone & Webster immediately after his graduation from the Massachusetts Institute of Technology in 1905. He advanced to the head of that department, and served in that capacity for many years. The City of Boston drafted him as Superintendent of Supplies, and in two years organized the work on a lasting and efficient basis. Following this, he took charge of purchases for the Christian Science Publishing Co. Mr. Loomis was an active member of the

# TONS

## of Johnson Quality

### UNIVERSAL BRONZE BARS



*Immediately  
from STOCK*

One bar . . . a hundred bars . . . or tons of bars . . . right off the shelf into your shop with no delay. Over 350 sizes—cored and solid—enables you to order *exactly* to your requirements. Complete machining—inside diameter—outside diameter—ends—saves you time, tools and purchase weight; protects you against hidden defects.

And it's quality bronze too! Cast in S.A.E. 64—the best general purpose bearing bronze available. Try this remarkable service on your next order. Complete stocks are carried in every industrial center. Give us an opportunity to prove our exceptional service. UNIVERSAL Bronze will prove its quality through performance.

*Write for  
FREE  
Catalogue*

CARRIED IN STOCK BY YOUR LOCAL DISTRIBUTOR



## JOHNSON BRONZE

*Sleeve BEARING HEADQUARTERS*

450 S. MILL STREET • NEW CASTLE, PA.

*When writing Johnson Bronze Company please mention Purchasing*



# EFFICIENT HOLDING OF WORK

for many different operations

## With BROWN & SHARPE MAGNETIC CHUCKS

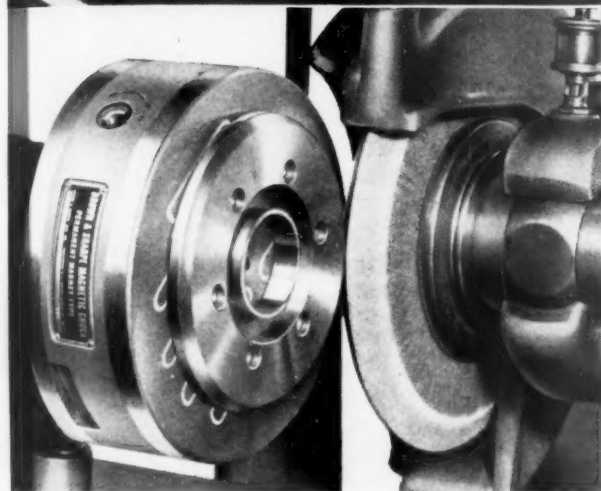
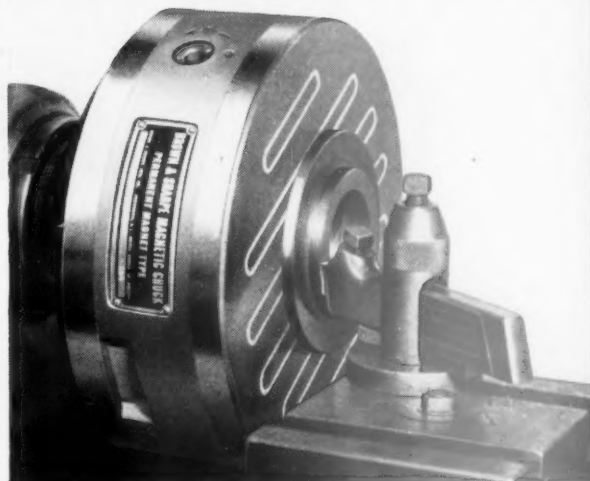
Permanent  
Magnet  
Type



No Wires —  
No Heating —  
No Running Costs —

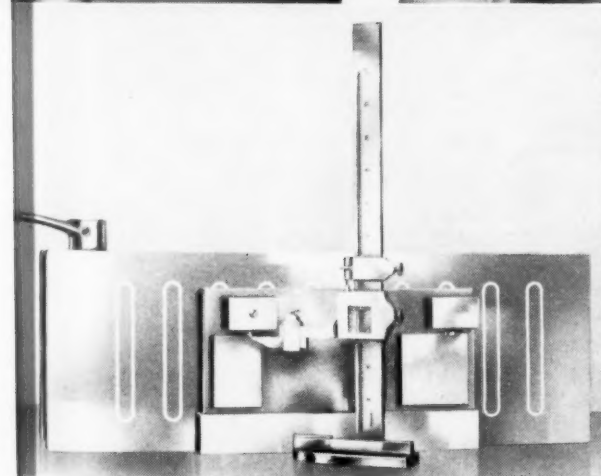
Wet  
Grinding

Light  
Lathe  
Work



Dry  
Grinding

On  
Shapers



Layout  
or Bench  
use

Light  
Milling  
Cuts



Parts difficult-to-hold as well as ordinary work are machined faster and more easily when held on these Permanent Magnet Type Chucks. Write for circular describing Rectangular and Rotary Models.



Brown & Sharpe Mfg. Co., Providence, R. I., U. S. A.

For sale only in the U. S. A.  
and its Territories

# BROWN & SHARPE



New England Association for twenty-one years, doing valuable committee work and serving a term as treasurer.

**Harold Chase** has been appointed Purchasing Agent of National Fireworks, Inc., West Hanover, Mass. He was formerly New England representative for the Prior Co.

**Carl W. Gram**, formerly Purchasing Agent for E. B. Badger & Sons, Boston, and a past president of the New England Association, has been named Executive Assistant to the President of the Lancaster (Penna.) Iron Works.

**W. E. Prescott** has been appointed Assistant in the Purchasing Department of the Walworth Co., Boston Works. He has for some years past been local buyer for the Chase & Sanborn Co.

**Blaine Yoder** of Falls City, Neb., has been appointed State Purchasing Agent by Governor-elect Dwight Griswold. Mr. Yoder previously served the State in the same capacity under Governor Arthur J. Weaver in 1929 and 1930.

**S. P. Hines** has been appointed Assistant Purchasing Agent for the Yawman & Erbe Mfg. Co., Rochester, N. Y. Mr.

Hines has been with the company fifteen years, and was Personnel Director prior to his recent appointment.

**Harold Van Eaton**, Purchasing Agent for the State of Washington, addressed the Washington Manufacturers' Association December 5th, emphasizing the producers' opportunity to stimulate interest in "Made in Washington" products.

**Charles A. Merrill**, Purchasing Agent for the Western Electric Co., New York, in charge of outside plant materials and non-ferrous metals, retired from active service December 31st, after 41 years with the company. A biographical sketch of Mr. Merrill appeared in the September issue of PURCHASING. Tucker G. Stover, formerly Assistant Purchasing Agent, succeeds Mr. Merrill in the position. J. J. McKenna, Purchasing Agent, takes over the non-ferrous metals division. Kingsley C. Gernon, formerly Purchasing Agent at the company's Point Breeze (Md.) plant, has been transferred to New York to succeed Mr. Stover, and H. G. Ross becomes buyer at Point Breeze.

**Glenn B. Taylor**, formerly Purchasing Agent for the Northwest Stellorene Co., Shelby, Montana, has been appointed Director of Purchases for the Merasco Mfg. Co., the motor making subsidiary of Lockheed Aircraft Co., Burbank, Cal.

**R. C. Sheppard** has been appointed Purchasing Agent for the Associated Shipbuilders, Harbor Island, Seattle, Washington.

**Howard L. Dingler** has been appointed Chief Purchasing Agent for the Chevrolet Gear, Axle and Forge Divisions, Detroit, succeeding B. D. Taliaferro, resigned. Mr. Dingler has been with the company 24 years. He became material supervisor at Detroit in 1929, and was appointed Assistant Purchasing Agent last January.

**Gordon Ainslie** has been appointed Purchasing Agent for the Barde Steel Co., Seattle. He was formerly in the purchasing departments of the Pacific Steamship Co. and Seims Drake Puget Sound.

**Miss Sylvia Olsoe** has been named Purchasing Agent for the Star Machinery Co., Seattle, succeeding Robert F. Driscoll, who resigned to enlist with the Canadian forces.

**James H. McNeal** has been appointed Purchasing Agent for the Weirton Steel Co., Weirton, W. Va., succeeding the late E. H. Kern. Mr. McNeal has been associated with the company since 1918, and was Assistant Purchasing Agent prior to his recent appointment.

**Alfred Parker** has been appointed Purchasing Agent for the Wico Electric Co., Springfield, Mass., succeeding Russell B. Day, who is now located at Tulsa in charge of the company's southwestern sales division.

BRUSH IT • DIP IT • SPRAY IT

# Steelbrite

THE BETTER RUST PREVENTIVE

## A Better Way

TO PROTECT YOUR PRODUCTS FROM

# Rust

**55¢**  
per gal.

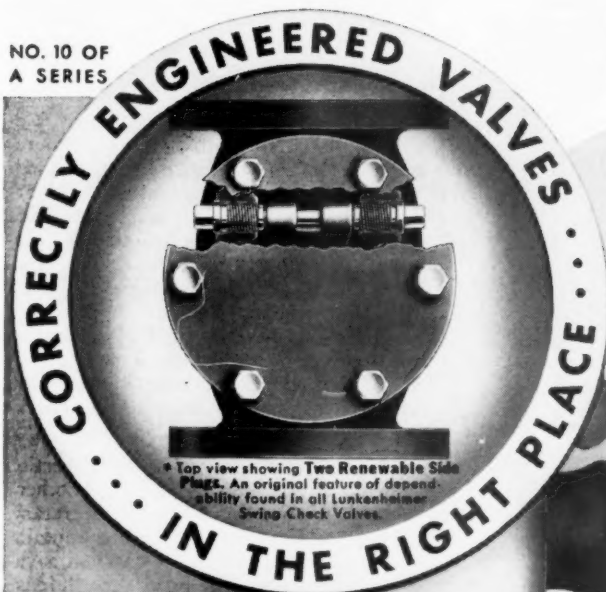
**NO LONGER** is it necessary for you to cover your finished products with messy grease or oil to protect them from rust during storage or shipment. Steelbrite does the job thoroughly and inexpensively. It is non-inflammable, may be brushed, sprayed or dipped, and sets up with a firm, clean, transparent surface. This coating is easily removed if desired but offers positive protection from rust.

Steelbrite is a proven product. During the past few years it has been completely tested under all conceivable conditions, including export shipping with its salt water hazard. Steelbrite may be used on shelf goods and on other products packed for eye-appeal. It will not stain the wrapper or carton.

The price is very much in line... only fifty-five cents in drums. And Steelbrite goes a long way. Why not write today for a trial gallon? Only ONE company among those adopting Steelbrite has ever discontinued its use. There must be something back of a record like that. May we have your order for a trial gallon?

A PRODUCT OF THE **SKYBRYTE CO.** CLEVELAND, OHIO

*When writing Skybryte Co. please mention Purchasing*

NO. 10 OF  
A SERIES

Where Dependability  
is the Measure of Valve Economy

## LUNKENHEIMER CHECK VALVES

ARE "CORRECTLY ENGINEERED" FOR  
MAXIMUM ECONOMY ON THE JOB!

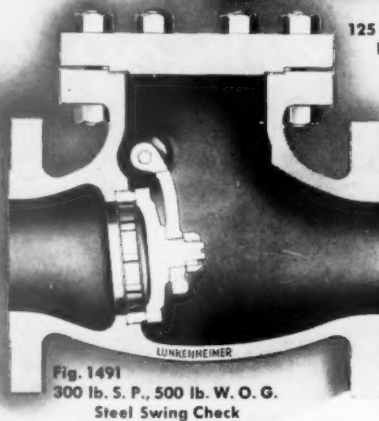
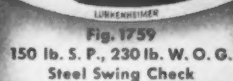
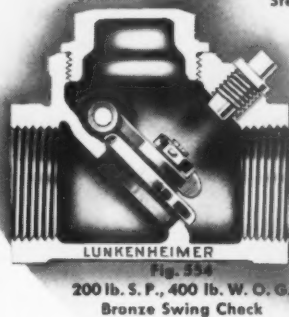
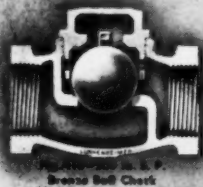
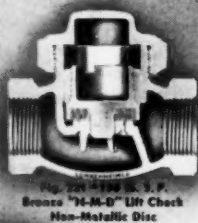
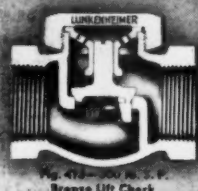


Fig. 1790—Class 125  
125 lb. S. P., 200 lb. W. O. G.  
I. B. B. M. Swing Check

● **DEPENDABILITY** in check valves is important! Their satisfactory performance means safe operation and protection of valuable equipment. They must be tight; they must stand guard against reverse flow in a line, which might endanger not only equipment and processes, but human life as well; they must protect low pressure sections of systems in which both low and high pressures are used.

Any need for a check valve should suggest caution and the exercise of every care in its selection. No other valve is more important.

\*All Lunkenheimer Swing Check Valves are provided with two renewable side plugs which serve as bearings for the disc carrier pin. Should a pin become

worn, causing misalignment and ineffective operation of the valve, it can be removed from either side—a particularly advantageous feature when valves are installed close to a wall.

### SEEING IS BELIEVING

Every year, many valve buyers visit the Lunkenheimer plants in Cincinnati. They've been told about "Correctly Engineered" Valves . . . they come to see, to inspect the iron foundry, the steel foundry, the metallurgical research laboratories, and watch, at first hand, the finer manufacturing in these great valve plants . . . they go away *sold*—not only on a product, but sold on the processes they never before knew went into the manufacture of a "mere valve."

Your Lunkenheimer distributor will gladly show you the many points where "engineered superiority" in Lunkenheimer Bronze, Iron and Steel Check valves guarantees accuracy, safety, and low cost service.

ESTABLISHED 1862  
**THE LUNKENHEIMER CO.**

"QUALITY"  
CINCINNATI, OHIO, U. S. A.

NEW YORK CHICAGO  
BOSTON PHILADELPHIA

EXPORT DEPT. 318-322 HUDSON ST., NEW YORK

# LUNKENHEIMER

Send for copy of our new Catalog No. 78. We will include our handy "Guide", for easy selection of valves, boiler mountings, and lubricating devices according to pressures, temperatures, and service applications.

# There's only CHAMPION COAL

*"It's the Best"*

When you add up the coal bills for the year, you'll find that Champion packs the extra value you like to buy. We actually tailor-make it to suit your combustion requirements! Champion is scientifically cleaned—you buy no unburnable refuse. It is accurately sized and thoroughly prepared to give you peak evaporation, higher overall efficiency . . . maximum results per pound of coal! • Prove it to yourself—make your next order read "Champion Coal."



PITTSBURGH COAL CO.  
CHAMPION COAL

## PITTSBURGH COAL COMPANY

General Offices: Oliver Building., PITTSBURGH, PA.

Cleveland, Ohio    Sault Ste. Marie, Mich.    Buffalo, N. Y.    Utica, N. Y.  
New York City    Philadelphia, Pa.    Youngstown, Ohio  
PITTSBURGH COAL CO., LTD., London, Ont.; Hamilton, Ont.; Toronto, Ont.; Windsor, Ont.  
PITTSBURGH COAL COMPANY of Wisconsin, Duluth, Superior, Minneapolis, St. Paul  
MILWAUKEE-WESTERN FUEL COMPANY, Milwaukee, Wisconsin



• Made of pure vegetable oils. Absolutely neutral. Will not injure finest surfaces. Cleanses thoroughly, quickly. Economical.

A complete line of WHIZ specialized Cleaning, Polishing, Disinfecting and Maintenance Products, in factory-sealed containers for institutions.

R. M. HOLLINGSHEAD CORP., CAMDEN, N. J.  
INDUSTRIAL DIVISION

WORLD'S OLDEST AND LARGEST MANUFACTURERS OF INDUSTRIAL CHEMICALS

## ASSOCIATION BENEFITS

(Continued from page 57)

commented on in trade papers and metropolitan dailies throughout the country.

From the N.A.P.A. you will also receive Business Measurements, Commodity Price Trends, and special articles by well known and recognized economists and business service corporations. The "Believe it or not" section of our bulletin considers opinions by recognized authorities on business conditions and trends, and also contains opinions on specific items and conditions. Whether you believe it or not, you at least have a medium for checking your own ideas and opinions.

The bulletin also contains a section called "From One P.A. to Another" written by our National Secretary, George A. Renard. This section contains well considered comments on such a variety of subjects as priorities, defense contracts, effect of laws and interpretations of their effect on purchasing policies, etc. To me, this section of the N.A.P.A. lighthouse sends out one of the brightest beams and is always worthy of attention and consideration.

Of course, all these advantages are relative. By that I mean that when conditions are normal, supplies are adequate, and all of our problems are along standard lines of activity, we are not so badly in need of the data referred to. But just as soon as clouds appear on the purchasing horizon, when national or international disasters occur, log jams pile up in essential materials, demand exceeds supply, and we are faced with priorities that we cannot control, then all of this information becomes of paramount importance.

I can safely state that the Purchasing Agent who attempts to keep his company out of buying difficulties in emergency times without taking advantage of this Association service is not only imperiling his own position but is very likely to imperil his entire company.

And I ask you if we are not rapidly approaching just such a situation. My experience goes back much further than that of many younger men. Well do I remember the days of 1914 to 1920 when the buyer went through the frenzied cycle of a world war—to be followed immediately by the great dip following the war. I can assure you that with all of the information that could be gathered from every available source, the life of a buyer was one continuous nightmare. I can't conceive of what it would have been without the vast amount of data made available by one Purchasing Agent to another.

The laws of purchasing are pretty well established, so that when you ask the N.A.P.A. for advice, it is a good deal the same as going to your lawyer for legal advice. The response you get from N.A.P.A. is not that of one person in particular but it is the studied consensus of advice which they in turn have obtained from a great many Purchasing Agents all over the country.

Now for fear you get to thinking of the N.A.P.A. as some great impersonal

*When writing advertisers please mention Purchasing*



*Easy* on His Face  
and on Your Budget

**NEW**  
**American**  
**R-9100**  
**Respirator**



Effective Economical  
**PROTECTION**  
against pneumoconiosis-  
producing and Nuisance  
Dusts...

This is a distinctly "new wrinkle" in the design of respirators for pneumoconiosis-producing and nuisance dusts. R9100 weighs only 1½ ounces . . . is more compact than any other approved respirator in this class . . . fits snugly to the face without obscuring wearer's field of vision, whether goggles are worn or not.

Effective filtering area is larger . . . because the entire facepiece is composed of tested, high-efficiency filter

material. And new standards of comfort are set by extreme ease of breathing, easy adjustability of wire-frame facepiece, and AO double headband. Let your AO Industrial Representative demonstrate this new respirator . . . and show you how it will definitely save you money to:

**BUY AMERICAN . . . BY AMERICAN**

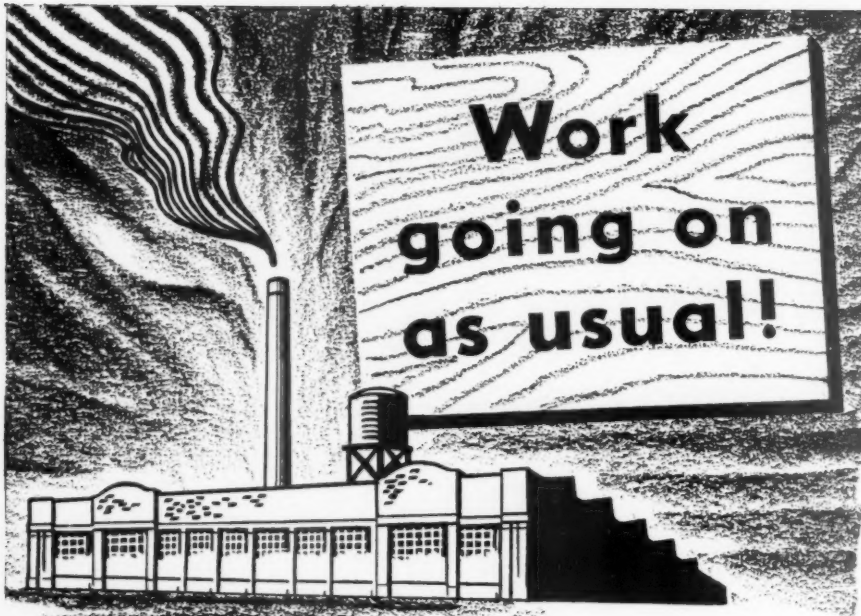
**American Optical Company**

Southbridge  Massachusetts

MANUFACTURERS, FOR MORE THAN 100 YEARS, OF PRODUCTS TO AID AND PROTECT VISION

When writing American Optical Company please mention Purchasing

9039



**O**F COURSE there's a lot of new faces around here at the Accurate plant — and new tools. Every square inch of space is being used. And the boss is watching things a little closer, too.

But, otherwise — Joe's still grinding the ends of those springs till every one is just right. Pete's tripping the treadle on his press like clockwork — the automatic coilers and four-slides are humming. And the inspectors are still watching springs, just as if their lives depended upon it.

*In fact, every order is getting the same careful, painstaking attention that it did when the plant was working at normal capacity. Yep, work's going on as usual.*



**ACCURATE SPRING MFG. CO., 3825 W. Lake St., Chicago, Ill.**

## **Fabricated Piping Materials**

**Bends  
Flanges  
Valves  
Fittings  
Bolts and  
Gaskets**

Bulletin 305 gives complete price list of all materials and labor operations necessary for fabricating piping. Write for your copy today.

**PITTSBURGH PIPING & EQUIPMENT CO. 10 FORTY-THIRD ST., PITTSBURGH, PA.**

thing away off in New York, let us bring it down to your own local association. You all have different problems in the normal course of your business. One of you buys carloads of castings and another one doesn't. When the fellow who doesn't buy carloads, hits a situation where he needs carloads, how simple a matter it is to pick up the telephone and call his brother member who knows all about carload buying, to get information of available suppliers and their relative merits. It works right at home, and to me this friendly feeling and spirit of cooperation between local buyers is well worth the price of admission to the Association.

Don't sit at your desk with a blank stare on your face looking out into space wondering where you can get something, when you have a telephone right at your elbow and a fellow Purchasing Agent waiting to help you. Maybe he is a competitor? What difference does that make? You know he will gladly share with you all the buying information he has.

Each of our buying problems is different. But that is the very reason why we need a common meeting ground for the interchange of information. The purchases of Westinghouse, where I have spent my life, would seem to some of you fantastic. Some of our engineers have figured out that if the copper wire we buy in a single good year were converted into sixteenth-inch wire, we would have a strand long enough to wind eight times around the earth. The insulating yarn we buy in one year could be looped 36 times from Earth to Moon. We use enough steel and iron each year to build two railroad tracks 2,290 miles long.

We buy gold and silver and mercury and tungsten. We buy oil and gas and hydrogen and nitrogen and oxygen. We buy 20,000,000 sapphires every year for our measuring instruments. But we also buy oat hulls and molasses and sugar cane and dextrine and flour and lard and lumber and tapioca, leather, wool, cotton, and meat products, to mention just a few.

How could I, or any man, keep a purchasing program so diversified as that on an even keel without continuous interchange of information made possible by the N.A.P.A.? And after all, in buying we are creating wealth. Who gets the wealth? The industries and farmers and mines, from whom we get the materials.

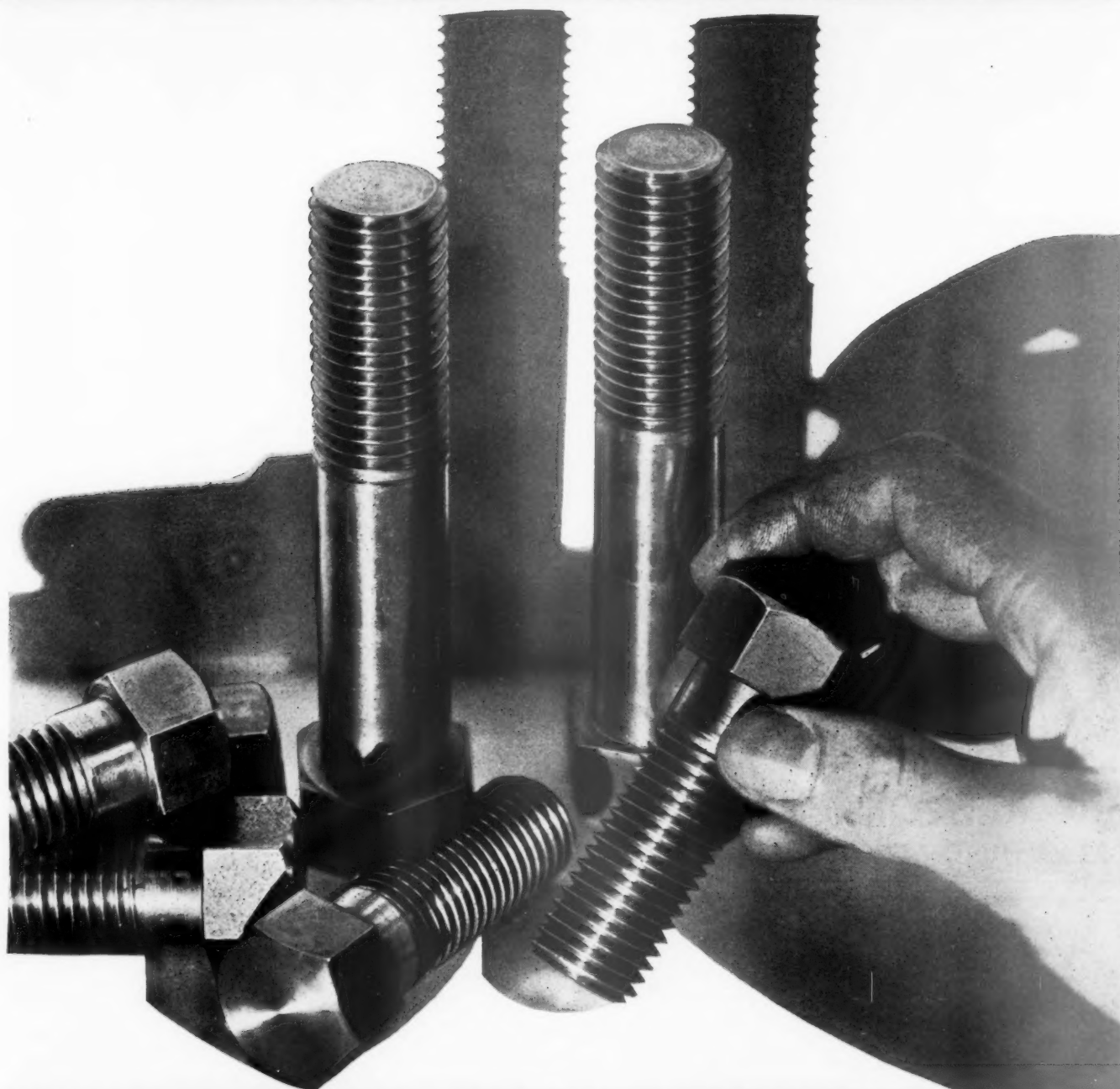
Business is really nothing but an elaborate process of swapping. We swap what we make for the materials we need to make our products. That is why none of us can consider ourselves as separate businesses. Along with thousands of others, each of our businesses is merely an essential cog in the tremendous process which has created American prosperity and the American way of living.

Let us not try to carry on our own shoulders too much responsibility. Let us recognize the need of a coordinated compilation of all available data, and let us make use of it.

*When writing advertisers please mention Purchasing*

# SHIPMENT » » » AT ONCE

● Right out of stock—for we maintain a stock of 30 *million* cap and set screws at our four warehouses and the factory for our customers' convenience. A full list of sizes, packed in cartons and kegs, both American fine and coarse threads, including hexagon, fillister and flat head cap screws, square head and headless set screws are always available to meet your urgent demands. Ask for Catalog E and current price list. THE CLEVELAND CAP SCREW COMPANY, 2934 East 79th Street, Cleveland, Ohio.



## CLEVELAND CAP SCREWS

SET SCREWS • BOLTS AND NUTS

Address the Factory or our Nearest Warehouse: Chicago, 726 W. Washington Blvd. • Philadelphia, 12th & Olive Streets  
New York, 47 Murray Street • Los Angeles, 1015 E. 16th Street

*When writing The Cleveland Cap Screw Company please mention Purchasing*



# DEFIANT!



**THESE MARKS DEFY THE  
SLASHING SLEET AND  
PIERCING COLD OF  
WINTER**

*—because they're made with  
Paintcil!*

Real paint in stick form. Applied under any condition . . . remains sharp and clear-cut under all conditions.

And note how easily marks are made. Imagine anyone ever wanting to go back to the cumbersome paint bucket-and-brush!

*Prove it yourself—with  
samples we gladly supply.  
Specify color.*

## PAINTCIL

**HELMER-STALEY, INC.**

323 W. HURON ST.

CHICAGO, ILL.

"Yours on Request" offers you the latest catalogs and manufacturers' announcements, information on new industrial products. Are you using this department? Turn to pages 10-16.

### FOSTERING GOOD WILL

**D**IRECTOR of Purchases A. Shnitka, of the Province of Alberta, at Edmonton, believes in promoting good will and cooperation, both with his vendors and with the government departments which he serves. He believes that this relationship can be attained most successfully by a clear and complete understanding of how the purchasing department operates and what it is trying to accomplish.

Just prior to the Christmas holidays, the following letter was sent to all vendors, carrying out a policy and practice which has been observed since the inception of the department:

"We feel that we cannot let this time of year pass without mentioning our appreciation of the cooperation and service that you have rendered to us during the past year, and particularly under present market conditions.

"While we realize that it is your business to make as many sales as possible, nevertheless you, as a Tax-payer, will also realize that we as a Purchasing Agency are responsible to the citizens and tax-payers whose money we are expending to procure on their behalf the most suitable goods and services required for Government purchases. Keeping this conception of our duty and function in mind, we feel that your cooperation in the past year has been very helpful in enabling us to achieve the desired results in helping to safeguard the welfare of this Province.

"We are assuming that by this time you are fairly well aware of the purpose, policy and ethics of the Government Purchasing Agency. If at any time you wish to ascertain the reason why your tender or quotation was not successful, we will be pleased to furnish you with the requisite information. The business of this Agency is conducted at all times on an absolutely impartial basis, and it is our constant endeavor to perform our duties without fear or favour, in what we consider to be the best interests of everyone concerned.

"Again thanking you for your past cooperation, and wishing you the Compliments of the Season."

Meanwhile it is the practice of the Purchasing Agency to issue a monthly memorandum to all department heads in the Government service, who may have occasion to use the services of the procurement division. The December memorandum was as follows:

"No one can be really happy who does not believe in his own honesty, and we frankly acknowledge that in the memos which the Purchasing Agency has sent to you from time to time, we have tried to convey the viewpoint that

## THE PURE OIL COMPANY

CHICAGO, U. S. A.

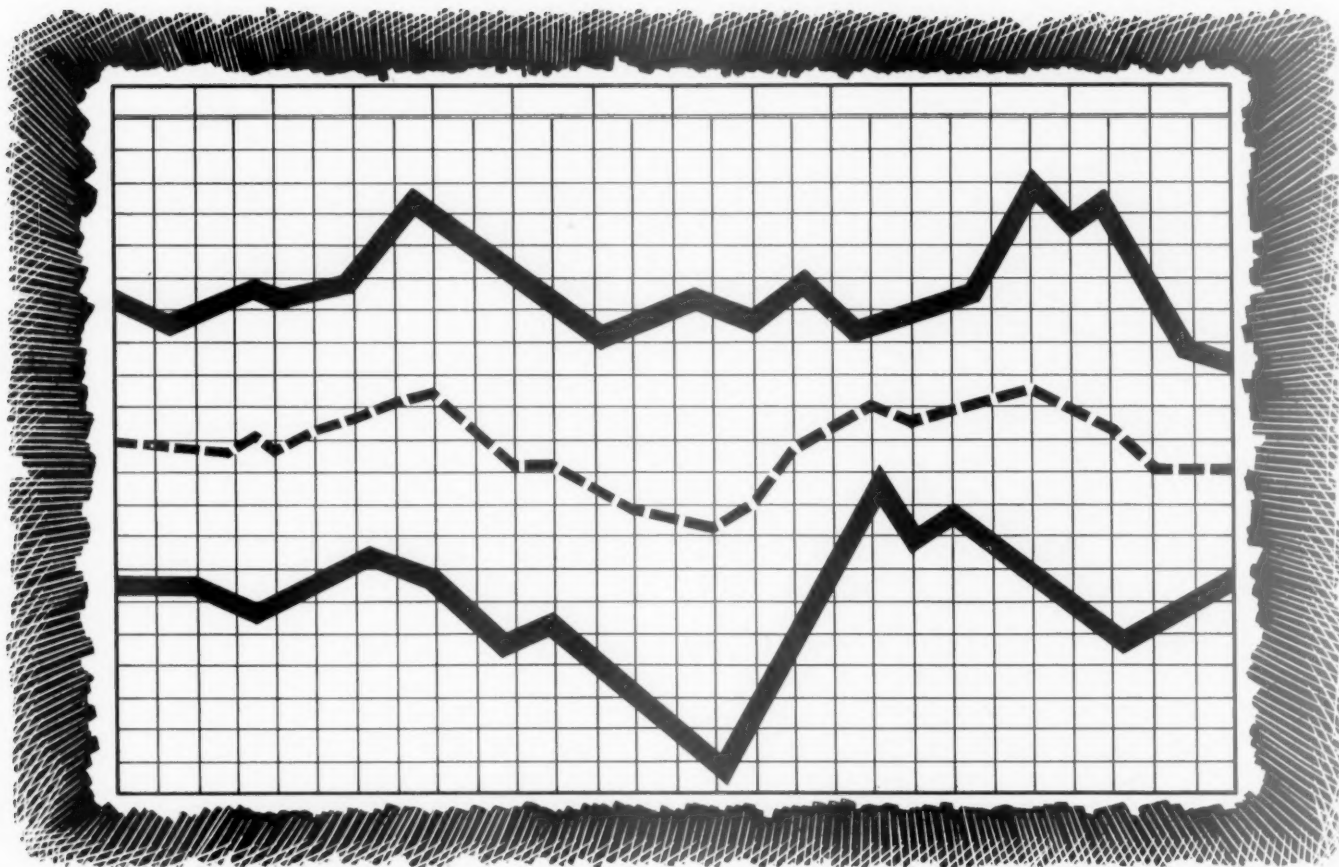
**A COMPLETE LINE OF INDUSTRIAL PETROLEUM PRODUCTS**  
A Pure Oil engineer will help solve your lubrication problems. Write today.



Be sure

with Pure

# When Is An Average?



An "average" has been humorously but accurately defined as "a method of concealing wide variations". That is why tests of corrugated board made "under average conditions" are so misleading. Boxes aren't subjected to *averages*, they're faced with *extremes*. If you'd like to learn how corrugated board made by the Stein-Hall Starch Combining Process really compares with board made by other methods write to any one of the companies named below for a copy of the report of some recent impartial—and revealing—tests of corrugated boards under extreme conditions.

CORN PRODUCTS REFINING CO.  
17 Battery Place, New York City

STEIN, HALL MFG. CO.  
2841 S. Ashland Ave., Chicago

CLINTON COMPANY  
Clinton, Iowa

A. E. STALEY MFG. CO.  
Decatur, Illinois

## THE STEIN-HALL PROCESS

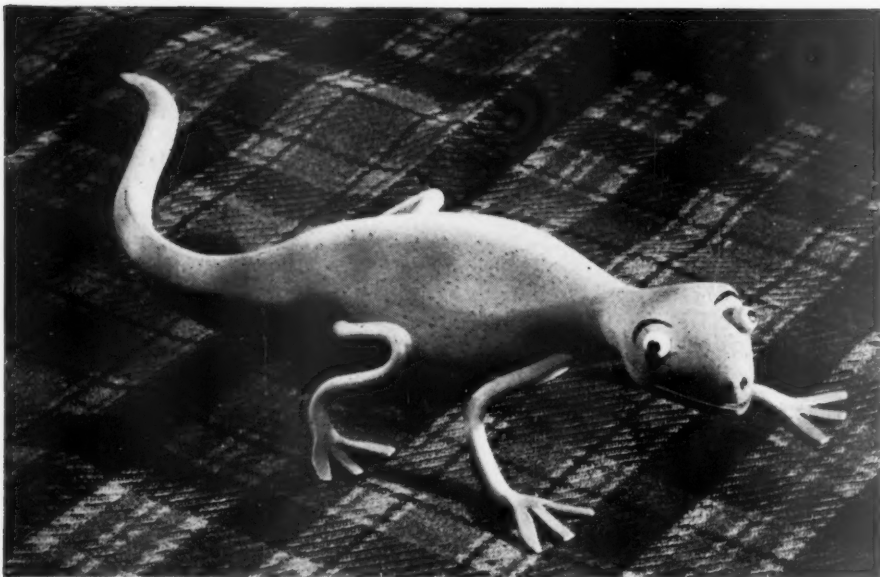
PENICK & FORD, LTD., INC.  
420 Lexington Ave., New York City

STEIN, HALL & CO., INC.  
285 Madison Ave., New York City

THE HUBINGER CO.  
Keokuk, Iowa

NATIONAL STARCH PRODUCTS  
820 Greenwich St., New York City

*When writing Stein Hall Processes please mention Purchasing*



## Bring On Your Plaids!

Any mediocre chameleon can adapt himself to a plain-colored background, but it takes a real go-getter to come through when placed on a plaid!

\* \* \*

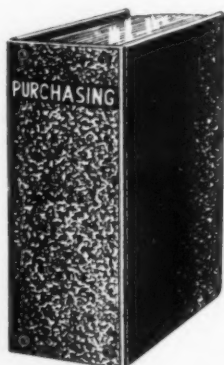
Ordinary adhesive problems we take in our stride, as a matter of course. It's on the tough ones—the "plaids"—that we can really demonstrate our ability and versatility. We invite your inquiries.

## NATIONAL ADHESIVES

DIVISION OF  
**NATIONAL STARCH PRODUCTS Inc.**

820 Greenwich St., New York

Chicago - Philadelphia - Boston - San Francisco—and All Principal Cities



**CONVENIENT - STURDY - ATTRACTIVE**

## BINDERS

**FOR YOUR COPIES OF  
PURCHASING!**

These binders hold up to twelve issues of *Purchasing* — copies easily inserted. Well made in attractive blue artificial leather with *PURCHASING* stamped in gold on back. Shipped postpaid. Price \$1.50. Order one each for your 1940 and 1941 issues today.

**PURCHASING — 205 E. 42nd ST., NEW YORK, N. Y.**

*When writing advertisers please mention Purchasing*

it was not a question so much of what we knew about goods and purchases, but what use we could make of what you knew, and the net results have been such that we can view them with considerable pride and no little satisfaction.

"During the short period of the Agency' existence we have endeavored to conduct ourselves in an absolutely impartial manner, dealing with each transaction without fear or favour, and to use our best judgment in securing for the Government the most suitable material at a fair price in every instance.

"We believe it is obvious that the Purchasing Agency has not remained static, but progress is being made day by day, and we now have a well-trained staff with a most comprehensive system of records, including a library of catalogues covering information of source of supply for every variety of requirement, locally or otherwise.

"The best results are obtained where competition is the most free and most severe, for strong people are not as much advertised by their loving friends as by their rabid enemies.

"On the great clock of time there is but one word—NOW! Let us then extend to you our appreciation for your cooperation, and, of course, not forgetting the Season's Greetings from myself and on behalf of my staff."

In commenting upon these communications, Mr. Shnitka remarks that the difficulties to which they are directed are such as "might help to eliminate themselves." That process is appreciably accelerated by the tangible expression of understanding and cooperation on the part of the purchasing agency.

1 1 1

### CENTRALIZED PURCHASING SHOWS SAVINGS

Three years ago, the Lake County, Illinois, Board of Supervisors, took steps to centralize purchases for the county and appointed Miss Florence Efinger as Purchasing Agent. Last month, Miss Efinger was reappointed for a two-year term, at a substantial salary increase. In announcing the Board's action, Supervisor Homer T. Cook, of the purchasing committee, took occasion to report that the work of the Purchasing Agent has saved the county many thousands of dollars.

1 1 1

### ZIVIAN BECOMES V. P.

Max Zivian has been appointed Vice President in Charge of Purchases for the Detroit Steel Corporation, supervising the buying operations of that company and its wholly-owned subsidiary, the Craine-Schrage Steel Co.

Morton Salt Co. Chicago, Ill.





**KIMPAK\*** CREPE WADDING  
DRESSES UP YOUR PRODUCT AS IT  
PROTECTS!



**KIMPAK** ENDS FUSS,  
MUSS AND WASTE IN YOUR  
SHIPPING ROOM!



**KIMPAK** ACTS LIKE A SHOCK-  
ABSORBER — ITS EXTRA RESILIENCY  
CUSHIONS EVERY BLOW!



**KIMPAK** GIVES  
MAXIMUM PROTECTION  
WITH MINIMUM BULK!



Showing how  
Stevens & Co.,  
Chicago, uses  
KIMPAK to pro-  
tect its fine gift  
packages.



## Protect Your Product with KIMPAK'S "Shock-Absorber" Action!

New Free Portfolio gives detailed descriptions on  
how to protect with KIMPAK. Send for it today!

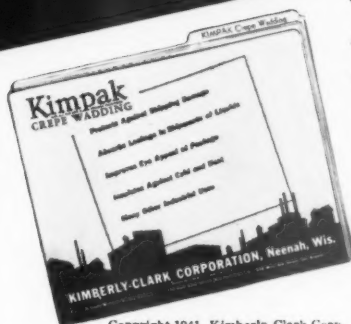
• Soft, yet resilient, KIMPAK\* acts as a shock absorber for your product in transit... guards against breakage, scratches, "press markings" and surface "burning." It helps protect you and your customers against losses due to shipping damage... saves time and waste motion in your shipping room... and dresses up your product as well.

You buy KIMPAK in rolls, sheets and pads of the thickness and size that meets your needs *exactly*. KIMPAK is inexpensive, lightweight, flexible... as easy to use as a piece of string. Since KIMPAK absorbs 16 times its own weight in moisture, it more than meets government postal regulations regarding shipping of liquids.

Don't delay. Mail the coupon below for definite suggestions on how KIMPAK can help you, and for free samples for testing.

**Kimpak**  
REG. U.S. PAT. OFF. & FOREIGN COUNTRIES  
CREPE WADDING  
protects your product  
dresses your package

**THIS FREE PACKING  
PORTFOLIO IS WORTH  
MONEY TO YOU!**



(\* Reg. U. S. and Can. Pat. Off.)

Copyright 1941, Kimberly-Clark Corp.

KIMBERLY-CLARK CORPORATION

P 1-41

Neenah, Wisconsin

Address nearest sales office: 8 South Michigan Ave., Chicago; 122 East 42nd Street, New York City; 510 West Sixth Street, Los Angeles.

Please send me Portfolio of KIMPAK.

Company.....

Address.....

Attention of:..... Our product is.....

When writing Kimberly-Clark Corporation please mention Purchasing

## OBITUARY

Raymond C. Purcell, 47, Foreign Purchasing Agent for the Congoleum-Nairn Co., died at his home in East Orange, N. J., November 28th. He had been associated with the company for twenty years, stationed at Brussels, and had returned to this country last July.

Peter A. Smith, 55, Purchasing Agent and Treasurer of the A. P. Smith Mfg. Co. and its subsidiary, the Federal Meter Co., East Orange, N. J., died of a heart attack at his home in South Orange,

December 1st. Mr. Smith had been an active member of the New York Association for twenty-six years, and at the time of his death was one of the six present members active since the first year of the Association's existence. A graduate of Stevens Institute, he was for many years prominently identified with civic, charitable and political groups of his community. He was a former president of the Chamber of Commerce and Civics of the Oranges, and of the Orange Rotary Club. The Chamber of Commerce named him as the outstanding citizen of the community in 1940. He

was a Purchasing Agent thirty-three years in the concern founded by his father.

Robert John MacFarlane, General Purchasing Agent of General Motors of Canada, died at the Oshawa (Ont.) General Hospital, December 4th. He had been in poor health for some time, and had been on leave from active duty with his company since November 1st. Mr. MacFarlane was Purchasing Agent for the Ford Motor Company of Canada from 1926 to 1930. In the latter year he became Assistant Purchasing Agent for General Motors at Oshawa, and was appointed General Purchasing Agent in 1937.

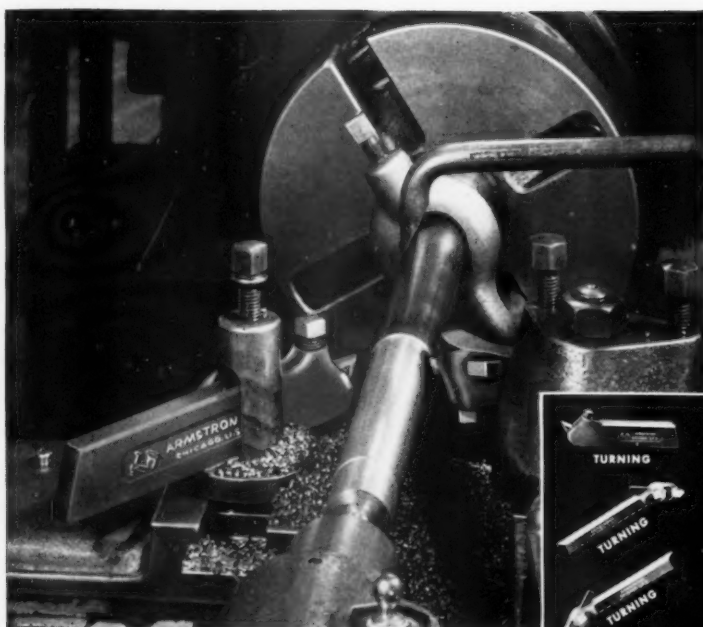
Thomas H. Boeshaar, 55, Purchasing Agent for the Wico Electric Co., West Springfield, Mass., died December 5th after a long illness. Mr. Boeshaar was formerly president and general manager of the Ames Sword Co.

Dewitt Clinton Freer, 80, formerly Purchasing Agent for the Cleveland Automatic Machine Co., died December 5th at his home in Hart, Mich., where he had lived since his retirement from active business twenty years ago. Mr. Freer was a charter member of the Cleveland Association.

R. L. Haddock died at his home in Earlington, Wash., December 8th. Mr. Haddock was a charter member of the Washington Association, and was active in its affairs until he retired from purchasing to enter the real estate field fifteen years ago.

Walter West, 29, Purchasing Agent in the engineering department of the Seaford nylon plant of E. I. duPont de Nemours & Co., died of a heart ailment, December 10th, at the Memorial Hospital, Wilmington.

# ARMSTRONG



## First come . . . ARMSTRONG TOOL HOLDERS

For any increased production your first need is for ARMSTRONG TOOL HOLDERS—tool holders to make dies, jigs and fixtures for the very tools of production are themselves products of the tool room. Under present "step-up" conditions, hours and days saved in the tool room are hours and days saved for the entire plant, and, there is one certain and easy way to step up tool room output. That is to use the correct ARMSTRONG TOOL HOLDER for each operation on lathes, planers, slotters and shapers. With the right tool holder you can safely step-up speed, feeds and output to the very maximum for ARMSTRONG TOOL HOLDERS will stand up to any speed or feed machine tools can pull.

The "Armstrong System" comprises over 100 sizes and shapes, all permanent tools that reduce tooling-up to the selection of a cutter and tightening of a set screw; that: "Save: All Forging, 70% Grinding and 90% High Speed Steel" and each does the work of a complete set of forged tools. ARMSTRONG TOOL HOLDERS are always available; are stocked by supply houses everywhere.

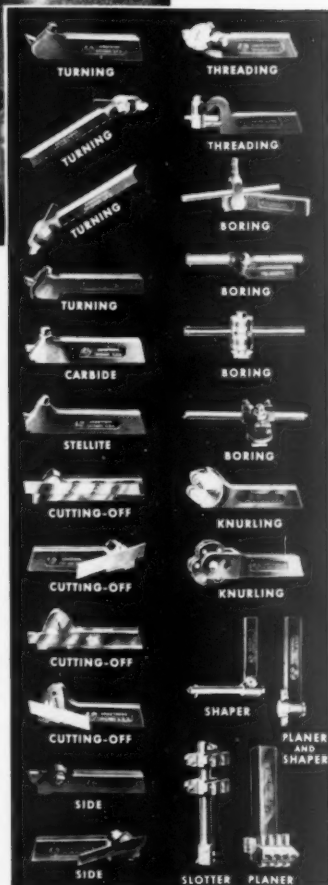
Write for Catalog.

**ARMSTRONG BROS. TOOL CO.**

"The Tool Holder People"

303 N. Francisco Ave. Chicago, U. S. A.

Eastern Warehouse & Sales: 199 Lafayette St., New York



## Only WIREGRIP Belt Hooks

have the patented blue Aligning Card that holds hooks in position, prevents them from loosening, prevents hook loss from handling prevents waste of short ends. Every WIREGRIP Hook to the last one can be used.

## Flexible BELT LACING

STEELGRIP is a stronger lacing for all power and conveyor belts. Clinches smoothly into belt, compresses the ends, prevents fraying, 2-piece hinged rocker pins prevent excessive wear. In boxes or long lengths.

Write  
for Catalog



**ARMSTRONG-BRAY & CO.**  
"The Belt Lacing People"

321 N. Loomis St. Chicago, U. S. A.

Urbane O. Rogers, 51, Purchasing Agent for the Portland (Oregon) Gas & Coke Co. for the past 21 years, died of a heart ailment, December 12th, at his home in that city, where he had been confined for five weeks. He had been with the company 28 years, and became Purchasing Agent on February 1, 1919. He was a charter member and consistently active in the work of the Oregon Purchasing Agents Association, serving as its president in 1924, and as associate editor of the *Oregon Purchasing News* for many years. He was also a member and officer of the Portland Industrial Traffic Club, and edited its publication, *The Traffic Manager*, from 1936 to 1939.

Fred Frawley, 68, Purchasing Agent of Hamilton County, Tenn., since 1926, died of a heart attack at the home of a friend in Chattanooga, December 12th. He had been in poor health for several years, but was active in the conduct of his office.

Andrew Peter Jaeger, Sr., 74, Purchasing Agent of Henry Heide, Inc., New York City candy manufacturers, for more than forty years and a director of the firm since 1916, died of a heart ailment December 15th, at his home in Jersey City.

Howard McDougall, 72, Purchasing Agent for the Jenkins Arcade Co., Pittsburgh, died at his home in Venetia, Penna., December 19th. He had been associated with the company since 1918.

#### PRODUCTION CAPACITY

Government and private economists are generally agreed that existing plant capacity, measured in terms of the Federal Reserve Board index of industrial production, is equal to about 140% of the 1935-1939 average. The adjusted index for November was 132, and advanced to about 135 in December. A further advance of two points or more is expected to take place during January, bringing the production index close to the theoretical ceiling. Because of increasing pressure on the heavy industries, and the consequent stimulation of activity in consumers' goods lines, it is estimated that industrial production will actually reach the existing plant capacity ceiling over the next several months.

Other factors to be considered are that such consumer goods lines as foods will probably decline in February and March, and may arrest the rise in the index, which is adjusted for a declining activity in January and expansion during February and March. Considerable new plant capacity will also be coming into operation during the latter part of the second quarter if present construction schedules are observed, and this new capacity is of course planned for the very lines where the greatest urgency exists. While it is not likely that the 140% ceiling will be lifted much before the middle of the year, real expansion is expected in the second half.



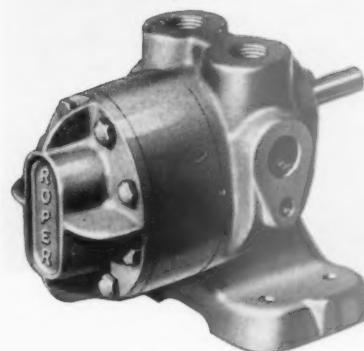
## HOW ABOUT ADDING *Your Name*

AS A USER OF

**ROPER** ROTARY  
PUMPS

The list includes most of the important names in industry . . . it should include yours because there is a Roper designed to meet your requirements.

From the 7548 different Roper Pumps available you can select practically a custom-built pump to handle your particular job with the highest degree of efficiency and at the lowest cost.



Eight series of pumps with capacities ranging from one to 1000 gallons per minute, pressures up to 1000 pounds per square inch, speeds up to 1800 r.p.m., 21 drives and mountings and eight piping arrangements. All illustrated and described in our Catalog. Roper Hydraulically Balanced Pumps are tops in performance . . . low in cost.



Write for  
Catalog 937

or see our Catalog  
in Sweet's.

**GEO. D. ROPER CORP., ROCKFORD, ILLINOIS**

# **ROPER** Rotary PUMPS

## **THE WIEMAN AND WARD CO.**

Producers and Shippers

### **COAL COKE PIG IRON**

Steam • Gas • By-Product Coal  
Furnace • Foundry • Domestic Coke

PROMPT AND EFFICIENT SERVICE

OFFICES: OLIVER BUILDING, PITTSBURGH, PA. ATLANTIC 5325  
CINCINNATI OFFICE: CAREW TOWER



# Meet the Family of RICHARDSON PLASTICS

## INSUROK Molded or Laminated Plastic

In sheets, rods and tubes; in sizes, grades and thicknesses for general and specialized plastics requirements for fabrication in your own plant. Richardson-produced gear blanks, bearings and precision molded and laminated parts and products.

**RUB-TEX.** Hard Rubber for acid buckets, trays, special chemical handling equipment, and parts for electrical use. Acid-resistant, non-corrosive, highly dielectric, readily fabricated.

**RUB-EROK.** An insulating material for electrical parts and equipment. Widely used for radio, for short wave switches, tube sockets, terminal posts, gang condensers and similar products.

**EBROK.** Bituminous plastic for storage battery containers. Resists impact, corrosion, temperature changes, destructive acid of electrolyte. Readily adapted for other uses.

**MICAROK.** High quality sheet mica for insulation. Can be sheared, and punched with ease, edges remaining clean and sharp. High insulating value at low cost.

### RICHARDSON TECHNICAL SERVICE

Available without cost or obligation to assist in solving your plastics problems. Literature and details gladly furnished on request.

## The RICHARDSON COMPANY

MELROSE PARK, CHICAGO, ILL. FOUNDED 1858 LOCKLAND, CINCINNATI, OHIO  
NEW BRUNSWICK, N. J. INDIANAPOLIS, IND.  
DETROIT OFFICE: 4-252 G. M. BUILDING, PHONE MADISON 9386  
NEW YORK OFFICE: 75 WEST STREET, PHONE WHITEHALL 4-4487

**In Full Dress...  
RELAYS  
... in Overalls!**

★ Your RELAYS may wear a "full dress" of polished chrome and gleaming bakelite . . . or the dull raiment of strict utility. You may want them de luxe "custom tailored" . . . or turned out in mass-production at a price. In either case, you get the best and HIGHEST QUALITY control for your job using

## RELAYS by GUARDIAN

From over 7000 standard control parts, and with incredible speed . . . Guardian can give you a "special" relay . . . perfectly matched to your job—to your size—to your price and production schedule.

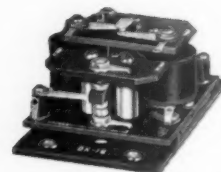
Get Guardian's 1941 Catalog now . . . or send your control problems for FREE ENGINEERING ADVICE. Find out how Guardian's accuracy, speed and economy keeps purchasing happy . . . production pacified . . . engineering contented . . . field service at a minimum. Write—

**GUARDIAN ELECTRIC**

1635 W. Walnut St.



Chicago, Illinois



**Series BK—16 Relay.** Built to minimum tolerances and the most exacting requirements in production quantities for the U. S. Signal Corps.

### PRIORITY RATINGS

The mechanics of the present system of priorities for governmental orders are embodied in two preference rating forms, indicating the authority whereby precedence in production and delivery is demanded, and extending the same preference in respect to subcontractors or suppliers working on the contract. The system applies only to government orders for national defense requirements, and is based on the priority clause in the Speed-Up Act of June, 1940, supported by the penalty clauses embodied in the Conscription Act, as outlined in these pages last month.

When the priority privilege is exercised, the following preference rating certificate is made a part of the order or contract:

### PREFERENCE CERTIFICATE

To be included as part of Army or Navy contracts to which the assignment of a Preference Rating is necessary and authorized

CONTRACT NO. . . . .  
IMPORTANT  
PREFERENCE RATING OF THIS  
CONTRACT OR ORDER

1. Army and Navy Munitions Board Preference Rating assigned to this contract is "\_\_\_\_\_." This prefer-

(Insert rating)

ence rating, except as noted in paragraph 4(a) herein, is not transferable.

2. The purpose of this Preference Rating is to insure delivery on the date specified in the contract insofar as this can be done without prejudice to contracts bearing a higher rating, but at the expense, if necessary, of contracts whether Army, Navy, private or export, bearing no Preference Ratings or those having a lower rating. This is not to be interpreted as requiring you to cease work on contracts bearing lower or no ratings and accomplish work on the highest-rated contract first, unless such action is considered unavoidable, nor should these instructions be construed to discourage deliveries earlier than asked for where no shortage exists.

3. Preference Ratings, in order of precedence, are: AA, A-1, A-2, . . . A-10, . . . etc. Classes may be further subdivided, e.g., A-1-a, A-1-b, etc.

4. (a) As prime contractor, you are hereby authorized to extend this Preference Rating by use of the attached form to subcontracts or orders issued by you for facilities and materials, including machine tools, contributory to this contract upon which you require precedence of delivery.

(b) In so extending this Preference Rating, you are limited to subcontracts or orders for items clearly necessary to the accomplishment of this contract, and to delivery dates not unreasonably in advance of your needs. Your cooperation in preventing abuse of this system will be greatly appreciated. You will note that the attached form for Extension of Preference Rating is required to be countersigned by a contracting officer of the Army or Navy or his agent.

5. If, despite the Preference Rating herein assigned, completion of this contract threatens to be delayed due to inability either on your part or that of subcontractors to accord the precedence intended by this rating, you are requested immediately to report the pertinent facts which threaten to cause delay, and the extent thereof, to the Priorities Committee, Army and Navy Munitions Board, and to include a request for further assistance. Upon the approval of such request, such additional steps as may be appropriate and practicable will be initiated by that Committee.

/s/ .....

Signature of Contracting or Requisitioning Officer, Army or Navy.

Contract No. ....

To extend the preference rating to suppliers and subcontractors, giving such supplementary orders the same force and precedence enjoyed by the original contract, the contractor is furnished with the following form as evidence of his priority claims:

#### ARMY AND NAVY MUNITIONS BOARD

#### MUNITIONS BUILDING

Washington, D. C.

#### CONTRACTOR'S EXTENSION OF PREFERENCE RATING

To:

You are advised that Army-Navy Munitions Board Preference Rating — has been assigned to

(Name of Company): .....

Applicable to Our Contract: .....

For Items: .....

Now scheduled for completion from .....to.....

Having been authorized to extend this rating to certain subcontracts and purchase orders, I hereby apply the above Preference Rating to our contract with you for

Item:

Quantity:

Contract No.:

Required delivery date:

I certify that the above items are essential to the completion of our contract, that the quantities are not greater than needed for that contract, and the required delivery date is not earlier than my actual need for these items.

.....  
Signature of Purchaser  
(Prime Contractor)

Authentication:

I concur in the need for the extension of Preference Rating herein granted, and believe the quantities and times of delivery required are reasonable.

.....  
(Countersigned, Contracting Officer or local Army or Navy Inspector)

Note to Prospective Supplier:

Please inform the purchaser without delay if the desired delivery date cannot be met so that an adjustment can be attempted before a report of unsatisfactory delivery is made to the government contracting officer.

If a delivery satisfactory to the scheduled progress of the contract described

## STREAMLINING PAYS

—In Home  
AND  
OFFICE!



The function of streamlining is to save time and work—to insure the utmost in service. Successful streamlining represents a combination of quality materials, manufacturing skill and creative brains. For example: Proctor's new never-lift electric iron actually saves the housewife 5000 lbs. of lifting in a single ironing day . . . Columbia's Ribbons and Carbons insure the "office wife" a maximum output of quality work from her typewriter—beautiful letters—clear, clean carbon copies.

In manufacture and in function, Columbia Ribbons and Carbons are streamlined to meet the needs and the speed of modern business. Today, low performance cost means more than low purchase price. Whether your requirements for typewriter ribbons and carbon papers be of a regular or special nature, you owe yourself a Columbia performance-cost check-up. Write or phone the Columbia office nearest you.

**COLUMBIA RIBBON & CARBON MANUFACTURING CO., INC.**

*Main Office and Factory:*

**GLEN COVE, L. I.**

**NEW YORK**

#### *Branches*

58-64 West 40th Street, New York City; 204 Dwight Building, Kansas City, Mo.; 327 South LaSalle Street, Chicago, Ill.; 155 West Congress Street, Detroit, Mich.; 227 East Michigan Street, Milwaukee, Wis.; 200 Plymouth Building, Minneapolis, Minn.; 107 Union Street, Nashville, Tenn.; 314 Pennsylvania Building, Philadelphia, Penna.; 908 Standard Life Building, Pittsburgh, Penna.; 205 East 6th Street, Cincinnati, Ohio (Harris-Moers Company)

#### *—Also—*

London, England

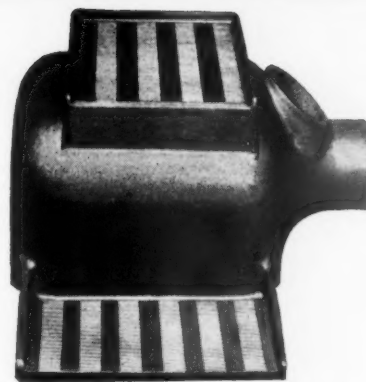
Sydney, Australia

# COLUMBIA

TYPEWRITER RIBBONS & CARBON PAPERS

## For Gray Iron Castings

SEE  
FOREST  
CITY



**F**OREST CITY produces castings of soft gray iron, high test semi-steel or alloy semi-steel. A recent soft gray iron casting for a housing cover produced in one of our foundries is pictured above.

Forest City supplies castings to widely diversified fields including:

*Automotive  
Pressure Pump  
Office Equipment*

*Electrical and Household Appliances  
Building Equipment  
Machine Tools and Equipment*

This wide diversification is backed by 50 years of casting experience—an experience that is at your command in meeting your casting requirements.

**THE FOREST CITY FOUNDRIES COMPANY**  
2500 WEST 27TH STREET CLEVELAND, OHIO

*When writing advertisers please mention Purchasing*

*That 1941  
may bring you good  
health and happiness  
is the sincere wish  
of*  
*Lawrence and Clarence Mayers*

**L. & C. MAYERS CO.**  
ESTABLISHED 29 YEARS  
IMPORTERS • MANUFACTURERS • DISTRIBUTORS  
545 FIFTH AVENUE, NEW YORK  
170 BROADWAY, NEW YORK  
ALSO PHILADELPHIA • BUFFALO • ALBANY • HARTFORD



**Here's What You Get When  
Buying Oakite Cleaning  
Materials For Defense Orders**

First of all, you get prompt delivery from complete warehouse stocks in strategically located cities; (2) a binding **GUARANTEE** backed by 31 years' experience; and (3) competent personal service . . . **FREE** . . . on your individual work.

Write and tell us your cleaning requirements or problems . . . there is no obligation.

OAKITE PRODUCTS, INC., 54 Thames St., NEW YORK

**OAKITE** *Certified* **CLEANING**  
MATERIALS . . . METHODS . . . SERVICE



Hundreds of Midwestern concerns put the burden of solving their cleaning problems on this Oakite Service Representative's shoulders. That's because his ability, knowledge and 14 years' experience enable him to successfully help Purchasing and Production executives secure the results they want.

He is typical of over 100 Oakite Service Representatives, one of whom is located near you. Why not get his money-saving ideas on your cleaning problems now? Look him up in your local 'phone book or write us direct.

Representatives in All Principal  
Cities of U. S. and Canada

above cannot be arrived at between the purchaser and the supplier, the supplier will return this contractor's extension of preference to the contractor, giving briefly the reasons therefor so that the matter can be submitted to Countersigning Officer.

It should be noted that preference ratings apply only to specific orders, and not to the entire operations of a contractor or supplier. Further, the authority does not affect any portion of a material or product not actually required for the filling of such contracts. To date, the machine tool and aircraft industries are the only ones whose whole production comes under the control of the system. The balance of supplies and of productive capacity in other cases remain in the status of an open market as before, though there will naturally be some restrictions of supplies and production wherever an appreciable portion of an industry is concerned in defense contracts. Purchasing officers for concerns engaged in defense contracts and for their suppliers on such projects should obtain the necessary certificates as evidence of their preferential right to secure deliveries.

1 1 1

**Purchasing Agents Testify**

Albert Korsan, Purchasing Agent of Globe Steel Tubes Co., Milwaukee; K. Ray Togstad, Purchasing Agent of the Madison Kipp Corp., Madison, Wis., and Harry E. Thorsen, Purchasing Agent of the Belle City Malleable Iron Co., Racine, were among the industrial executives who testified last month before the Federal Power Commission examiner and members of the Wisconsin Public Service Commission, that the introduction of natural gas in the state would be welcomed because it would tend to reduce production costs and selling prices, with a resulting increase in business and employment.

1 1 1

**Public Buyers Elect**

The Pacific Northwest Public Buyers Conference has elected the following officers for the coming year: Chairman, Ross B. Cooper of Multnomah County, Oregon, succeeding Harold D. Van Eaton, Washington State Purchasing Agent; Vice Chairman, Arthur M. Angove, Assistant Purchasing Agent, City of Tacoma; Secretary, Silas Rich, Seattle School District No. 1.

1 1 1

**N.A.P.A. Executive Committee  
Will Meet in Chicago**

The mid-winter meeting of the Executive Committee, National Association of Purchasing Agents, will be held in Chicago, January 25th and 26th. In addition to the regular business scheduled for this meeting, the committee looked over the facilities and preliminary arrangements for the 1941 convention, which will be held in Chicago next May.

*When writing advertisers please mention Purchasing*



## FORBES URGES CITY PRINTING PLANT

**A** JOINT report submitted by Russell Forbes, Commissioner of Purchases for the City of New York, and William B. Herlands, Commissioner of Investigation, proposes the creation of a New York City Printing Authority, to build and operate a plant capable of producing 60% of the printing used annually by the city government. Such a plant, the report estimates, would substantially eliminate corruption in the handling of city contracts and would save the city at least \$250,000 a year on its \$2,000,000 annual printing bill.

Under this plan, the Printing Authority would be governed by three non-salaried commissioners to be appointed by the Mayor. It would have a monopoly on the printing required by all city agencies, including the Board of Education, Board of Higher Education, Board of Water Supply, Transit Commission, Board of Transportation, which are bodies created by state statute.

The Authority would be empowered to build or rent a plant, which could be equipped at an estimated cost of \$350,000. A director of printing and two deputy directors would be appointed to manage the plant. Employees, taken from civil service lists, would be hired by the day. All supplies for the plant would be obtained through the Department of Purchase. The printing to be done in this plant would include pamphlets, books, documents, periodicals, blank books, forms, pads, posters and cards. The plant would not print textbooks or do stencil and mimeograph work.

The estimated 40% of the work that would be done by private companies would be let on contract by the Authority. The Authority would have power to issue \$1,000,000 in bonds to pay for plant and equipment. Its revenue would be in the form of payments by the city for printing work. Although the city would not be liable for debt incurred by the Authority, surplus revenues would be paid into the city's general fund.

A plan of procedure and accounting is suggested in the proposal. The Authority would determine the prices to be charged the city for work done, and would be required to keep a cost accounting system and to provide reserves for depreciation, obsolescence and debt retirement. Invoices for each item would be subject to audit by the Comptroller. In setting up a standard of working conditions for employees, the Authority would be required to adhere as closely as possible to general working conditions in the New York City printing industry.

The proposed bill would also create a Board of Printing Control and a Board of Visitation. The former would make a continuing study of city printing requirements, with an objective of standardizing the forms used by the various departments. Its mem-

DETROIT CLEVELAND  
CHICAGO PITTSBURGH  
**SAFETY GRINDING WHEEL FACTORY**  
Springfield, Ohio  
ST. LOUIS WHEELING  
CINCINNATI

**JUST THE  
RIGHT WHEEL**  
When You Want It . . .  
Where You Want It!

SAFETY GRINDING WHEEL SERVICE assures you overnight delivery on stock items to any of the points indicated above. Trial orders on specification wheels completed promptly.

**SAFETY**

**THE SAFETY GRINDING  
WHEEL & MACHINE CO.**  
Est. 1889 Springfield, Ohio

Safety Grinding Wheels are giving satisfactory performance in metal working plants in all parts of the country. And Safety assures you just the right wheel, when and where you want it.

Our research department keeps abreast of the ever changing composition of grinding wheels and metals.

Our production engineers, with over 90 years combined experience, working with the most modern equipment, make SAFETY WHEELS that are accurate, uniform, and durable.

And our experienced engineers are available to work with you on any of your grinding problems. Write today . . . there's no obligation.

**cut-off  
metal the  
economical  
way**

● The most economical method of cutting-off identical pieces from bar steel is with a MARVEL Automatic Production Saw. It will give you more pieces per hour, per machine and per dollar cost than any other cutting-off method. Figured in cost per piece, it will have the lowest tool cost and the lowest labor cost too, because MARVEL Automatic Saws operate with no more attention than an automatic screw machine. They keep chip loss down to a minimum and on many jobs will give you extra pieces per bar (extra profits).

For fast automatic production or for single-cut miscellaneous work, MARVEL 6A or 9A Hack Saws are fast, accurate tools. Capacities 6"x6" or 10"x10", single or nested bars. Write today for Bulletin No. 600.

**ARMSTRONG-BLUM  
MFG. CO.**  
"The Hack Saw People"  
5700 Bloomingdale Ave., Chicago, U.S.A.  
Eastern Sales Office:  
199 Lafayette St., New York



## INSULATING VARNISHES . . . for every electrical need

● For thirty-five years, "IRVINGTON" has developed, manufactured and used insulating varnishes,—experience that accounts for the high quality of "IRVINGTON" and HARVEL Varnishes.

"IRVINGTON" Varnishes are of the oxidizing type containing drying oils, and HARVEL Varnishes are of the resin type, solidifying throughout by chemical polymerization and condensation. Both are manufactured in a variety of types and characteristics

to fulfill specific requirements in the electrical field for dipping, brushing, spraying, vacuum and pressure applications. Complete data sent upon request; or we will gladly work on your individual problem.

Other "IRVINGTON" Insulations include Varnished Cambric, Duck, Fiberglass, Silk and Paper; Varnished and Extruded Plastic Tubings; Composite Slot Insulation; Protective Paints and Enamels; Oil Stop; Coil Sealing Insulation.

## IRVINGTON VARNISH & INSULATOR CO.



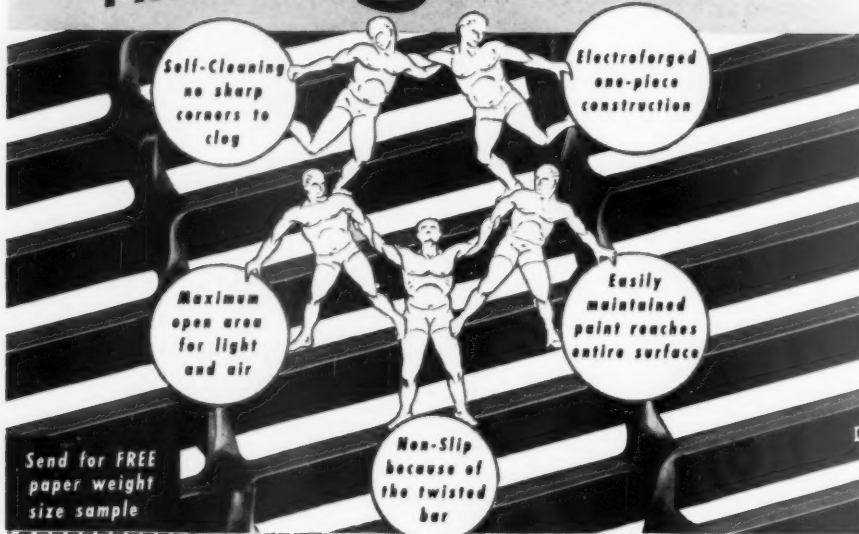
IRVINGTON, NEW JERSEY, U. S. A.

PLANTS AT IRVINGTON, N. J. and HAMILTON, CANADA

Representatives in 20 Principal Cities

## BLAW-KNOX GRATING

PRESENTS **5** OUTSTANDING FEATURES



Send for FREE  
paper weight  
size sample

BLAW-KNOX DIVISION of Blaw-Knox Co.  
2075 FARMERS BANK BUILDING · PITTSBURGH, PA.

NAME \_\_\_\_\_

STREET \_\_\_\_\_

CITY \_\_\_\_\_

STATE \_\_\_\_\_

bers would be the director of the plant, the Comptroller, Budget Director, Commissioner of Purchase, Corporation Counsel, and a representative of the Board of Education and of the Board of Transportation. This Board would meet once a week, except during July and August, and would have power to appoint a director of printing control and several other employees, the number not to exceed fifteen.

The Board of Visitation, consisting of a representative of the printing industry, a representative of the printers' union, and three representatives of civic organizations, would be appointed by the Mayor and would serve without pay. This Board, which would have no direct or indirect transactions with the Authority, would inspect the plant periodically and observe the work of the Authority to see that it was conforming to the proper laws and regulations. The Board would make an annual report to the Mayor, which would be printed in the City Record.

Included in the Forbes-Herlands report is a draft of the proposed bill creating the Authority and defining its functions as above. If the proposal is favorably considered by the Mayor and the Board of Estimate, that bill will be introduced in the State Legislature in January.

The report is based on a two-year investigation by the Departments of Purchase and Investigation, one of several concurrent investigations of

## Increase Safety use SAFETY STEEL STAMPS



Heavy Bevel Style

Standard Heavy Bevel Safety Stamps will give an outstanding performance on any type of marking. They are constructed for hard continuous use and never have to be taken out of production to have their heads dressed, because they will not spall or mushroom. Safety Stamps will give at least 50% to 100% more service than ordinary tool steel stamps.

Light Bevel and Wedge Grip styles can also be furnished on Safety Steel.

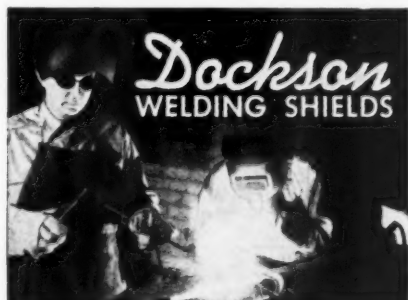
Write for prices and literature.

**M. E. CUNNINGHAM CO.**  
154 EAST CARSON STREET  
Pittsburgh, Pa. Tel.: Hemlock 2470

public printing contracts. (See *PURCHASING*, May, 1940) It discusses at length the scandals of the past, in connection with such contracts. Last spring, investigations were begun by District Attorney Thomas E. Dewey and by Governor Herbert H. Lehman, who appointed Frederick E. Crane, former Chief Judge of the Court of Appeals, as a commissioner under the Moreland Act to investigate contracts between state agencies and printers.

In March, Mr. Forbes removed the names of twelve printing companies, including the Burland Printing Co. and the DeVinne-Brown Corp., from the bidders' list of the Department of Purchase, charging that these concerns were members of a ring that controlled the city's printing through collusive bidding. Nine other firms had been previously banned from the list.

"A municipal printing plant," states the report, "would greatly minimize the possibility of corruption and manipulation, because the opportunity and incentive for such function would be eliminated. Collusion among city printers has been an essential element of the pattern for plunder in city printing. Without collusion, the maintenance of personal, political and corrupt relationships by the more important printers would have been too costly an investment. Perforce, collusive bidding became the normal mode whereby most city printers conducted their business."

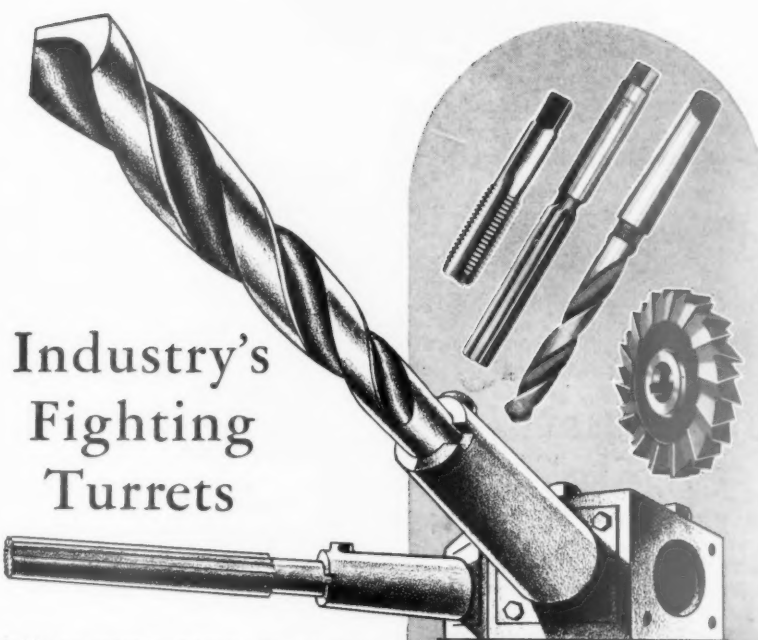


**A** CORRECT  
SHIELD FOR  
EVERY WELDING  
HAZARD IN A  
COMPLETE PRICE  
RANGE . . . . .

SEE YOUR JOBBER  
OR WRITE FOR  
NEW CATALOG TO



**DOCKSON Corporation**  
WELDING & SAFETY EQUIPMENT  
3805 WABASH AVE. • DETROIT



## Industry's Fighting Turrets

Slip a drill, or reamer, or tap, or counter-bore into a turret lathe, and you've got some of the best ammunition available to build our bulwarks of defense.

Knowing that the efficiency of the mightiest machine depends upon the tool at its workhead, there is built into Morse Tools the quality that insures maximum production. MORSE TWIST DRILL & MACHINE CO., New Bedford, Massachusetts, U. S. A.

**MORSE  
TOOLS**  
Keys To High  
Production



**NICKEL SILVER  
PHOSPHOR BRONZE  
NICKEL ANODES**

COPPER  
BRASS  
BRONZE  
ZINC

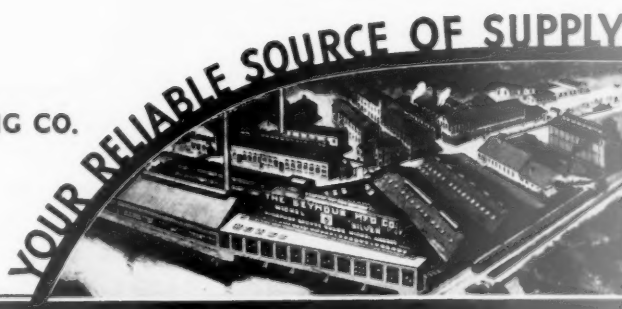
**ANODES**

**BRIGHT NICKEL**

Write for data

**THE SEYMOUR  
MANUFACTURING CO.**

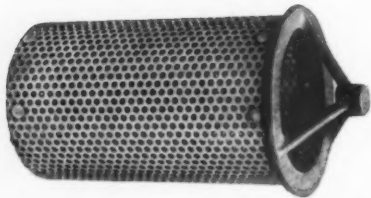
55 FRANKLIN ST.  
SEYMOUR, CONN.





## JELLIFF

**LEKTROMESH**



### FUEL OIL STRAINER for NATIONAL DEFENSE

JELLIFF fuel oil strainers are used in aeroplane installations where the ultimate in safety and dependability are sought.

This JELLIFF product owes its uniformity and exactness to its method of manufacture — a recently perfected process of depositing virgin metal electrolytically to form a metallic screen of designated length or thickness from 25 to 400, hole count per linear inch.

#### Superior to Old Product

While possessing advantages not physically possible to attain in woven wire cloth it still can be drawn, stamped, welded or soldered.

Where scraping operations are involved its glass-smooth even surface enables it to withstand wear. It possesses greater rigidity and exactness of openings than has ever before been possible in a screen cloth product.

JELLIFF engineers not only possess knowledge of metal characteristics and fabrication technique, but are also informed on mill practices and are able to assist in the details of processes for which intended equipment is to be used.

#### P.A.'s check list

- ☐ Screen Cloth
- ☐ Industrial Mesh
- ☐ Insect Screen
- ☐ Lektromesh
- ☐ Fabricated Screen Parts
- ☐ Resistance Wire
- ☐ Dipping Baskets
- ☐ Metal Filter Cloth

Write for details

Sales representatives, working from key cities, completely cover the country

**C. O. Jelliff Mfg. Corp.**  
Southport, Connecticut

"The printing inquiries have disclosed that the abuses are not of recent origin or confined to one or two firms. These abuses are symptomatic of a system of doing business which has been followed by generations by many city printers. The printers who were examined did not believe their collusive activities involved any moral turpitude. They regarded collusion as the only practical way by which businessmen would not lose money in dealing with government."

A further criticism voiced in the 250-page report concerned the Board of Elections. It states on this point: "The Board of Elections was guilty of gross inefficiency and willful waste in the purchase of printing, stationery and supplies. The methods employed by the Board in the purchase of printing, stationery and supplies encouraged a monopoly. The Board was influenced by personal and political motives in the purchase of printing, stationery and supplies. The elections printing monopoly was part of a broad conspiracy to divide all city printing among a group of so-called 'city-printers'."

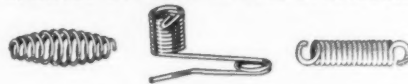
♦ ♦ ♦

A. H. Newman of the purchasing department of the Connecticut General Life Insurance Co., Hartford, was a guest of honor at a company luncheon last month, commemorating 20 years of service with the company.

### IN MANY OF AMERICA'S MOST FAMOUS PRODUCTS



SPRINGS BY HUNTER ARE STANDARD



SAFEGUARDING QUALITY AND  
GOODWILL



YET HOLDING DOWN COSTS.  
INCREASING PROFITS!

SEE HOW YOU CAN SAVE WITH

*Springs*  
by Hunter

HUNTER PRESSED STEEL CO., LANSDALE, PA.



Write us today

**No Obligation Whatsoever!**

### THE UNCLE SAM BUTTON



For every real American, who is proud to be a member of Uncle Sam's family, this button has been designed.

The Parisian Novelty Company of Chicago have been granted the sole license to manufacture these buttons and all those interested in buying them should correspond direct with this source. Although royalties are being donated to The American Red Cross, the cost of these buttons is quite low, making them a splendid goodwill give-away item for use by any individual, company or organization.

The wording originally suggested for the button has been changed to "I Am Proud He Is My Uncle", making the new button suitable for wearing by both nephews and nieces of Uncle Sam.

These buttons will have a double purpose, as they have a real patriotic significance which is important to everyone.

**The EASIEST WAY to get  
a GOOD GALVANIZING  
JOB!**



**ENTERPRISE  
GALVANIZING  
COMPANY**  
2519 E. Cumberland St.  
Phila., Pa.

Your inquiries handled promptly and courteously . . . your work handled by thoroughly experienced, skilled personnel under the direction of responsible ownership-management.

Very large, completely equipped shop. Our own fleet of trucks for local deliveries; complete facilities for prompt shipment via any railroad. Galvanized products furnished.

### FINANCIAL OFFICERS REPORT ON STATE PURCHASING

A recent report of the National Association of State Auditors, Comptrollers and Treasurers concerns centralized purchasing practice in five states — New York, Virginia, Missouri, Maryland and Massachusetts. The study was made by E. E. Naylor of the U. S. Treasury Department. It shows that lower prices have been paid for state supplies and greater efficiency effected in the purchasing departments under centralized control. The savings are attributed to standardization of departmental supplies, competitive bidding, and purchasing on contract or in bulk.

Typical procedure includes provision for the submission of estimates of needs from state departments; advertising, receiving and opening of bids; award of contracts; inspection of deliveries; and approval of invoices for payment. Public opening of bids prevails, but most states now prescribe that awards shall be made to the lowest *responsible* bidder, rather than merely to the lowest bidder, thus permitting some discretion in the selection of suppliers. Supervision exercised by the central purchasing department of bureau generally includes some measure of control over emergency or open market purchases.

Exemptions from the general responsibility of the purchasing department vary. New York exempts the purchase of prison-made goods, joint

contracts involving labor and supplies, and telephone and electric light and power service; also purchases of state agencies whose maintenance costs are less than \$500 per year, and purchases which total less than \$500 during a 60-day period, provided the items are not on the list of centralized purchase contracts. Virginia exempts the purchase of supplies for the State Highway Commission and Alcoholic Beverage Control Board, automobile license plates, perishable articles, emergency purchases, and purchases under \$100. Massachusetts exempts the purchase of materials for legislative or military purposes. Missouri exempts emergency purchases of \$25 or less.

1 1 1

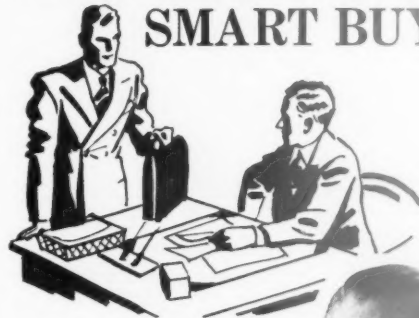
### ELECTRIC TRUCKS & TRACTORS

Domestic bookings of electric industrial trucks and tractors for November reached the highest point in a number of years. The Industrial Truck Statistical Association's figures, just published, reveal. A total of 249 units were booked compared with the previous high for the current year of 193 units in October.

Total net value of bookings for chassis only was \$827,003.73 as against the October figure of \$653,682.20.

Cantilever type trucks accounted for 193 units of the total, capacities and base chassis price of which ranged from 1000# to 10,000# and \$2025 to \$5255 respectively, with a total net value of

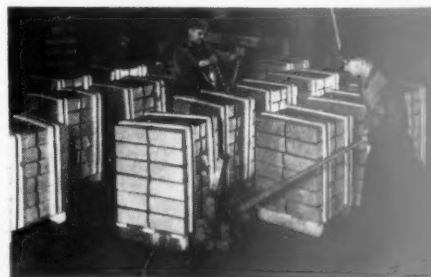
## IT LOOKED LIKE A SMART BUY



### —UNTIL I FIGURED RECEIVING ROOM COSTS

That bid looked like the best this year! Then the shipment came in—proving to be exceptionally hard to handle and unpack. Receiving room costs were way out of line! It changed the entire picture!

### ACME Steelstrap Means Minimum Receiving Room Costs



This purchasing agent would have told another story had the shipper used Acme Steelstrap on his shipments—as on the shipment shown above. Acme Steelstrapped for reinforcement and protection, this shipment will be easily, quickly and economically handled. One snip of each strap—and the contents are removed swiftly and easily! Receiving room costs are cut to the bone. Insist on Acme Steelstrapped shipments. It's better buying—and the supplier benefits, too, with lower shipping and handling charges.

Buy Acme Steelstrap and Unit-Load band for your company's shipments, too. It can be bought most economically on the Acme Strap Buying Plan. Mail the coupon for complete details. No obligation.

### ACME STEEL COMPANY

2842 ARCHER AVENUE, CHICAGO, ILL.  
Branches and Sales Offices in Principal Cities

ACME STEEL COMPANY  
2842 Archer Ave., Chicago, Ill.

- ☐ Furnish complete information about the Acme Strap Buying Plan.
- ☐ Mail a copy of "Stopping Profit Leaks," describing the advantages of Acme Steelstrap.

Name

Address

City  State

*Improves the  
appearance of millions of letters  
and office records every year!*

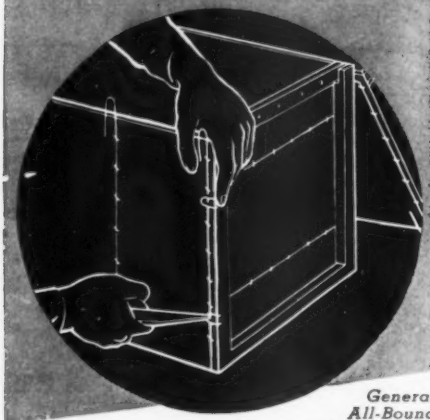
**WEBSTER'S  
CARBON PAPERS  
AND TYPEWRITER RIBBONS**

*Free Service and Samples*

Leading business concerns have benefited through helpful suggestions from their nearby Webster Representative. You are entitled to this service. Ask us for samples, too. Write—F. S. Webster Co., 7 Amherst St., Cambridge, Massachusetts.

When writing advertisers please mention Purchasing

## DESIGNED FOR THE DEFENSE OF YOUR PRODUCTS



General  
All-Bound  
Box, assembled without  
nails, comes in one piece  
—easily, quickly set up.

● Defense should start at home. Packing and shipping methods in many plants have not kept pace with modern designing and manufacturing. Delays, unnecessary costs and damage are the hidden penalties.

Manufacturers of scores of different types of products have increased their handling and shipping speed, decreased material and labor costs and provided adequate protection for products in transit by utilizing the facilities of the General Box laboratories. Here skilled technicians determine the type of container best suited to meet each problem, or design special containers to fit individual requirements.

You can be sure that your products have the advantages of adequate protection and faster, safer, lower cost handling and shipping. Just send for the facts about General Box products and laboratory service. There is no obligation.

**SEND FOR THIS  
FREE MANUAL**



Illustrated. Shows how products similar to yours are packed and shipped in General Boxes and Crates which effect important economies. Mail the coupon.

## GENERAL BOX COMPANY

General Offices: 48 Illinois St., Chicago, Ill. District Offices and Plants: Brooklyn, Cincinnati, Detroit, East St. Louis, Kansas City, Louisville, Milwaukee, New Orleans, Sheboygan, Winchendon. Continental Box Company, Inc.: Houston, Dallas.

☐ Send a free copy of the new manual "How Research Can Save \$5 for You."

Name.....

Address.....

City.....

State.....

\$649,968.93. All net values shown are at factories, after additions and deductions for variations from standard specifications, trade-in allowances, etc., when applicable. In addition, there were 17 Non-Elevating Platform Trucks, capacities and base prices ranging from 3000# to 6000# and \$1660 to \$3035 respectively, having a total net value of \$33,074.80; 17 Crane Trucks, capacities and base prices ranging from 3000# at 7 ft to 10,000# at 5½ ft. radius, and \$4980 to \$7450 respectively, with a total net value of \$96,770; 16 Tractors, capacities and base prices ranging from 200#-1000# to 475#-2000# Draw Bar Pull and \$1300 to \$2595 respectively, had a total net value of \$25,190; 5 Special Non-Load Carriers and 1 Paper Roll Handler of 4000# capacity, with base prices ranging from \$3600 to \$4285, had a total net value of \$23,000.

1 1 1

**Capt. Ned Woodman**, Coast Artillery Reserve, has been appointed Arkansas State Contracting and Purchasing Officer for the CCC, with headquarters at Little Rock. Captain Woodman has been associated with the CCC for four years as commander of the camp at Monticello, Ark.

**L. Newman** has been appointed Purchasing Agent of Thompson Spa, Boston, Mass., succeeding L. W. Taylor, who has become manager of a large restaurant in Rochester, N. Y.

## See WOODSTOCK TYPEWRITERS

## ACE STAPLING MACHINES

Clinch Friendships for Life!  
PERFECT IN EVERY PERFORMANCE

MILLIONS  
Prefer ACE  
EFFICIENCY  
and  
ECONOMY

**Lifetime Guarantee**  
OF FAITHFUL TROUBLE-FREE  
STAPLING SATISFACTION

\$6



### "ACE" STANDARD

Our popular leader, representing the highest achievement in stapling efficiency for Lifetime Jam-proof Service. Uses Standard Staples-210 Capacity.

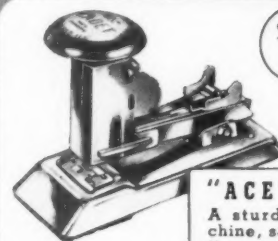
\$4



### "ACE" PILOT

A medium-size all steel, precision built machine. Performance unmatched in its price range. Uses Standard Staples-210 Capacity.

\$3



### "ACE" CADET

A sturdy small machine, same construction, as the Pilot with shorter magazine. Uses Standard Staples-105 Capacity.

\$4.50



### "ACE" CLIPPER PLIERS

Lightweight, easy action, yet built for lifetime performance. Uses Undulated Staples-210 Capacity.

### ACE STAPLE REMOVER

Saves your finger-nails... prevents torn papers. Every stapling machine operator should have one.

60¢



\*EAST OF ROCKIES  
ORDER FROM YOUR STATIONER

### ACE FASTENER CORPORATION

Makers of the World's Best Stapling Machines  
3415 N. Ashland Ave. Chicago, Ill.

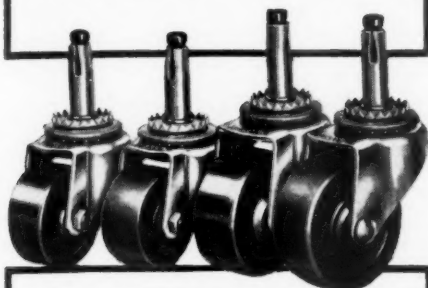
When writing advertisers please mention Purchasing



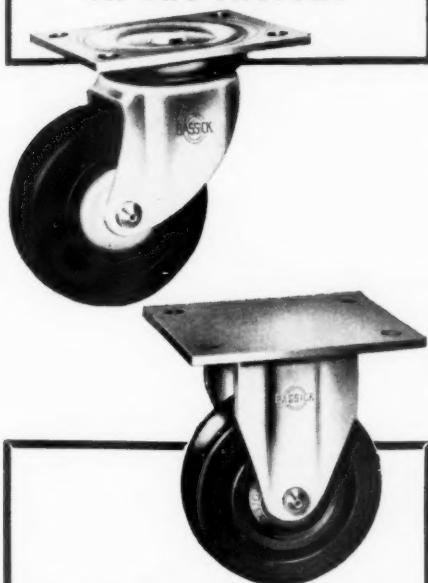
# Bassick

## CASTERS FOR EVERY PURPOSE

FROM OFFICE EQUIPMENT



TO MATERIALS HANDLING  
IN THE FACTORY



STANDARDIZE ON

# Bassick

With Assurance of Quality,  
Economy and a Guarantee  
of Satisfaction

•  
Bassick is the Largest  
Caster Manufacturer  
in the World

•  
Sold by Leading Industrial  
Distributors and Office  
Equipment Dealers

Complete Catalogs on Request.

**THE BASSICK COMPANY**  
Bridgeport Connecticut

Division of the Stewart-Warner Corp., Chicago, Ill.

Canadian Factory:

STEWART-WARNER-ALEMITE CORP.  
OF CANADA, LTD., BELLEVILLE, ONTARIO

### BROWNING IS APPOINTED

Albert J. Browning, merchandise manager (heavy lines) for Montgomery, Ward & Co., has been named as the representative of the Coordinator of Defense Purchases in the office of the Quartermaster General, U. S. Army, Washington, D. C.

1 1 1

### COLLEGE BUYERS MEET

The third annual meeting of the Business Managers and Purchasing Agents of Florida Colleges and Universities was held at Stetson University, De Land, Fla., November 18th. C. R. M. Sheppard, Purchasing Agent at Stetson, was host for the gathering and made the local arrangements. Previous meetings have been held at Rollins College and the University of Florida.

The principal subject of discussion was the relative merits of various types of institutional heating systems. E. T. Brown of Rollins presented data concerning the individual heating unit system, while K. H. Graham of Florida U. spoke on the central heating plant for campus buildings.

1 1 1

### FRINK IS TRANSFERRED

Charles Frink of the purchasing department of Dow Chemical Co., Midland, Mich., has been transferred to the company's new plant at Freeport, Texas, in a similar capacity.

this MODERN  
HARPER  
PLANT

makes ONLY  
non-ferrous  
and stainless  
fastenings



ONE COMPLETE manufacturing unit that manufactures BOLTS, NUTS, SCREWS and WASHERS out of everything EXCEPT IRON and STEEL.

Cap Screws of BRASS, Lag Screws and Hanger Bolts of BRONZE, Bolts and Screws in EVERDUR, Washers, Rivets and Nuts of MONEL and most every type of STAINLESS fastenings you could require. Every popular type and size in all the alloys.

That's the story — 3600 STOCK ITEMS in every alloy except iron and steel and plenty of production equipment to make those small troublesome specials you need right now.

Send for the 72-page Harper Catalog — "Bible" of the non-ferrous and stainless fastening industry. The H. M. Harper Company, 2606 Fletcher St., Chicago.

# HARPER

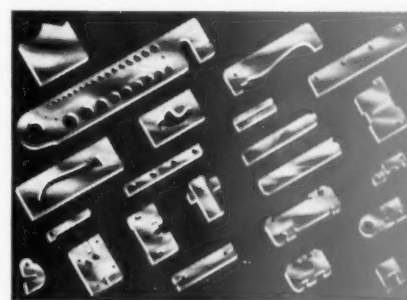
Chicago

# DON'T TIE UP MEN and MACHINES

GRINDING STOCK

FOR

PARTS LIKE THESE



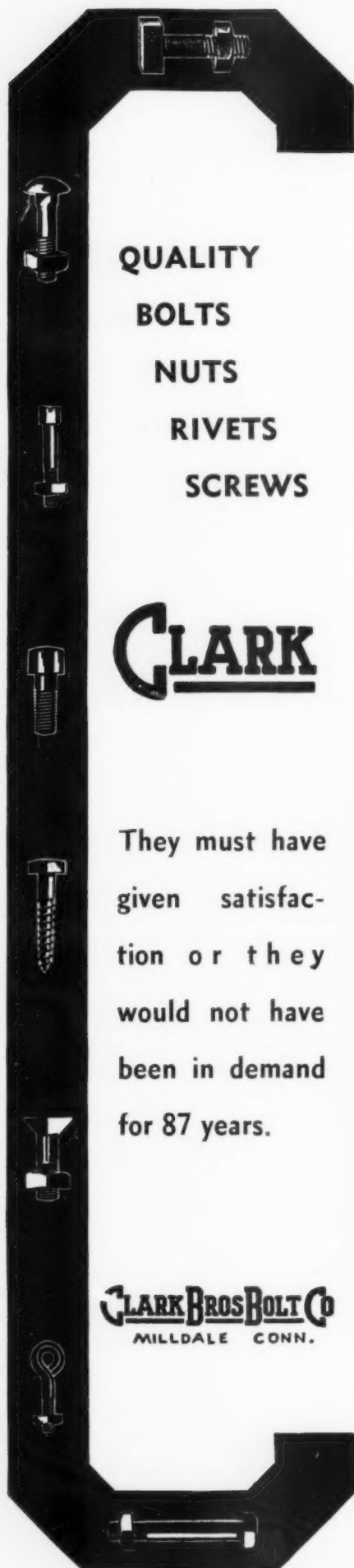
It's quicker, easier and cheaper to use Starrett Ground Flat Stock for special gages, tools, templates, jig, fixture and machine parts, punch dies, etc. Made of high grade annealed tool steel cut lengthwise from the sheet and ground to within .001" in thickness, No. 495 Flat Stock is available in 18-inch lengths in a complete range of widths and thicknesses. Easily machined and heat treated. Each piece packed in individual envelope and marked for quick identification. Order a supply today. Write for special Ground Flat Stock Folder "P" and a handy reference wall chart.

# STARRETT GROUND FLAT STOCK

THE L. S. STARRETT CO.  
ATHOL • MASSACHUSETTS • U. S. A.

Standardize on  
**STARRETT  
TOOLS**

Buy Through Your Distributor



QUALITY  
BOLTS  
NUTS  
RIVETS  
SCREWS

**CLARK**

They must have  
given satisfac-  
tion or they  
would not have  
been in demand  
for 87 years.

**CLARK BROS BOLT CO**  
MILDALE CONN.

#### GENERAL FELT COMPANY OFFICERS ARE MOVED

The purchasing office of the General Felt Company has been moved from New York City to Glenville, Conn., where the company's general offices are now located. Kenneth R. Peattie, Purchasing Agent, continues in charge at the new location. Sales offices are still maintained in New York.

#### LEONARD RETIRES

Claude W. Leonard has retired from active business after a long record of service as Purchasing Agent of the Bristol Co., Bristol, Conn. Mr. Leonard is widely known among Purchasing Agents through his regular attendance at national meetings. He is a past president of the Connecticut Association, and held the office of National Director at the time of his retirement.

George O. Smith, Assistant Purchasing Agent of the Minnesota Power & Light Co., Duluth, is the subject of a biographical sketch in the November issue of "Contact," the company's employee magazine, noting his place on the Service Honor Roll. Mr. Smith has been associated with the purchasing department since 1923. He is a past president of the Twin Ports Association.

#### Mr. P. A. Have You Written

for the economy facts about No. 1303 Case Sealing Glue? Purchasing Agents in the country's largest industries prefer it for greater economy and security. There's no obligation, write today.

THE  
COMMERCIAL PASTE CO.  
508 BUTTLES AVE.  
COLUMBUS, OHIO

**Evans'**

No. **1303**  
CASE SEALING GLUE  
*Sticks Tighter—Goes Farther*

## PEP UP

*your*

## PAPER WORK



*Standardize on*  
*Weston's*  
**WINCHESTER  
LEDGER**

(50% Cotton Fibre Content)

*for hard-working forms*

Records and forms that lead a short but strenuous life require a paper of at least 50% cotton fibre content grade. You will see a big difference in the speed and efficiency with which typed or hand-written paper work is handled if you change to *Weston's* Winchester Ledger—the paper for hard-working forms made by the *Leaders in Ledger Paper*. Ask your form supplier. He'll agree, "If it's a *Weston* ledger paper, it's a better ledger paper." Then ask him to put your next lot of forms on *Winchester Ledger*.

#### BE A BETTER PAPER BUYER

Read *Weston's Papers*, a special publication packed with news, ideas and information of special interest to paper buyers. Sent free on request. Address,

**BYRON WESTON COMPANY**  
DALTON · MASS · Dept. P



## THIN PAPERS are Essential to MODERN BUSINESS

to reduce  
Office and Factory  
expenses.

Specify one of  
**ESLEECK**  
THIN PAPERS

Fidelity Onion Skin  
Emco Onion Skin  
Clearcopy Onion Skin  
Superior Manifold

Recommended for  
Thin Letterheads, Copies,  
Records, Advertising.

Ideal for Air Mail, Branch  
Office and Foreign  
correspondence.

SEND FOR SAMPLES

**ESLEECK**  
Manufacturing Company  
Turners Falls, Mass.

### ALLOYING ELEMENTS ARE IN AMPLE SUPPLY

The United States is fortunate in having the world's principal molybdenum supply within its own borders, and the principal nickel supply in Canada, on the same continent, says the *Wall Street Journal* in a survey which indicates that no bottlenecks are likely in this vital phase of defense work. Nickel and molybdenum are used in greater volume than any other steel alloying metals, with nickel by far the larger of the two. So far there have been no delays reported in shipments of either metal, and it is not thought likely that any strictures will occur.

International Nickel Co. of Canada, Ltd., has engaged to supply all the nickel the British Empire needs, but apparently has been able to step up output also to care for all shipments to the United States, its largest single market. Climax Molybdenum Co., whose properties are located in Colorado, has lost a large part of its foreign markets through embargoes placed on such countries as Japan and Russia, and by the blockade of the European continent. Increased consumption here and in England has only partially offset this loss, leaving ample capacity for domestic defense requirements.

Tungsten supplies are adequate for some time ahead, although considerable tungsten is imported from China. The

## KOH-I-NOOR

DRAWING  
PENCILS

10c  
EACH

Manufactured  
in U. S. A.



Koh-I-Noor Pencil  
Company, Inc.  
373 Fourth Ave.  
New York, N. Y.

## BOUND TO BE SAFE



Loose leaf sheets of any size can be safely bound forever in Liberty Permanent Binders. Not a sheet can be removed or misplaced.

Your office has many standard and special size loose leaf forms that must be preserved. All can be inexpensively bound in Liberty Binders by your own office help. No tools needed. Thumb pressure locks posts forever. Sheets cannot be lost. Binders have no projecting posts or locks—stack evenly or fit flush on shelves.

You have everything to gain by investigating. Attach this ad to your letterhead and mail with a sample sheet for FREE SAMPLE BINDER to fit, and price list.

Free Sample  
ANY SIZE



**BANKERS BOX COMPANY**  
536 S. CLARK STREET • CHICAGO, ILL.



Don't delay making the most of your stencil dollars. Compare values now! But, be sure you gauge by patent-protected Tempo Film—the only stencil that solves your wasteful, costly problems of type-filling, type-cleaning, cut-outs and roller swelling . . . a few reasons why particular users prefer Tempo Film—the all-time high in stencil values.

You'll prefer them too!  
Mail this advertisement  
today for full details.  
**MILO HARDING CO.**  
437 W. Pico Blvd., Los  
Angeles, Cal., 513 Com-  
monwealth Annex, Pitts-  
burgh



**Tempo**  
FILM  
STENCIL



When you have a  
screw driving job

# APEX

has a  
**POWER BIT**  
for it

•  
*For Phillips Screws*



APEX-Phillips Power Bits are available for nearly all makes of electric, air and spiral drivers. There are two grades—General Purpose, for the standard screw, and Super Service for case-hardened, self-tapping screws.

*For Slotted Head Screws*



APEX Power Bits are made for all popular makes of electric, air and spiral drivers. Special Bits furnished to meet unusual requirements. Available for Flat, Oval, Round and Binding Slotted Screws in sizes from No. 4 to No. 18.

*For Clutch Head Screws*



APEX Power Bits for Clutch Head Screws are made for all the popular makes of electric, air and spiral drivers.

Whatever your needs are in Power Bits for Power Drivers, write APEX first for tools that will last.

•  
**The  
APEX MACHINE & TOOL  
Company**

Patterson Blvd., Dayton, O.

federally-controlled Metals Reserve Corp. has been building up a stock pile of the metal. Chrome supplies also come from abroad, but thus far shipments have not been seriously interrupted, although the price of some grades has risen. Accumulations of chrome are also being made in this country.

The leading source of vanadium is Peru, but the Vanadium Corp. of America has collected a substantial supply of ore and no danger of a shortage appears likely. Vanadium Corp. is refining this ore at the maximum capacity of its plants here.

The other elements such as tantalum, titanium, etc., appear to be available in sufficient supply. Manganese, essential to all steel making and not exactly in the same class with the special alloys, is being taken increasingly from Cuba, though Russian and other important sources have not been shut off to any major extent.

An added safety factor in the present alloy situation is the interchangeability of many of the major alloying elements. If a shortage of one type of material develops, it is frequently possible to secure an alloy steel of similar characteristics by increasing the proportion of one or more other elements. This interchangeability is believed to have been made use of in Germany when certain supplies were cut off by the war blockade.

The extremely exacting demands of modern war materials, particularly the

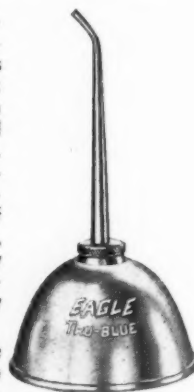
## EAGLE OILERS SPEED PRODUCTION

While streamlining your production methods don't overlook the saving in time that good oilers give you. Plants standardize on the complete line of Eagle Oilers, because they are strong, durable, and easy to operate.

Eagle Tru-Blue Oilers have no solder or brazing compound inside or out. Their carbon steel bottoms are seamed to one-piece drawn heavy steel bodies with True Double Seam. They have a more comfortable, easier grip.

For true efficiency and lasting service use Eagle Oilers. See your distributor, or write to us for any information.

**EAGLE MANUFACTURING CO.**  
Dept. 711 Wellsburg W. Va.



## COILED WIRE SPRINGS

*Wire Form  
Specialties*



SPRINGFIELD  
OHIO, U.S.A.

COMING TO NEW YORK?

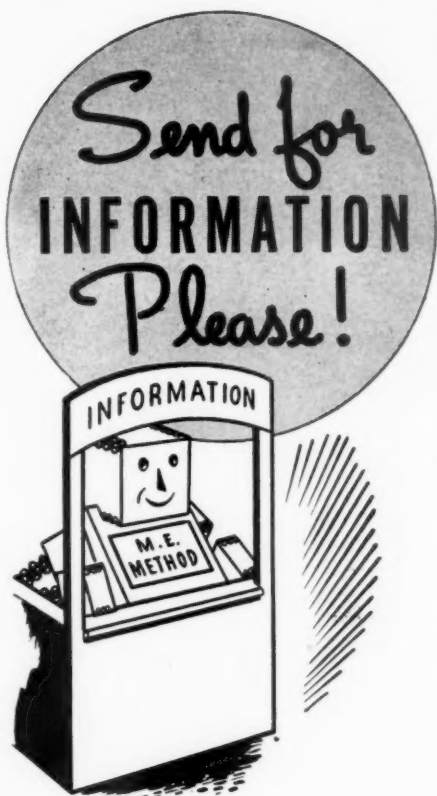
**S** TOP AT  
"A GREAT HOTEL"

SINGLE from \$3. DOUBLE \$4.50

1 BLOCK FROM PENN. STATION  
B. & O. Motor Coaches stop at our door.

**HOTEL  
McALPIN**

BROADWAY AT 34th ST., NEW YORK  
Under KNOTT Mgt. John J. Woelfle, Mgr.



At this moment you may not be particularly interested in Metal Edge packaging.

Your present packaging may seem highly satisfactory and you have no thought of change.

Nevertheless, you do feel that your job is to keep a jump or two ahead.

Here's a packaging method like nothing else on the market, paying big dividends to clever merchandising firms in almost every line of business you can name.

It produces the "strongest paper boxes," — when wanted and where wanted. The boxes are assembled from "flats" in your own plant. The Method produces economies and advantages in several directions.

Wouldn't it be well to be ready to answer any questions about this packaging method that is sweeping into such prominence?

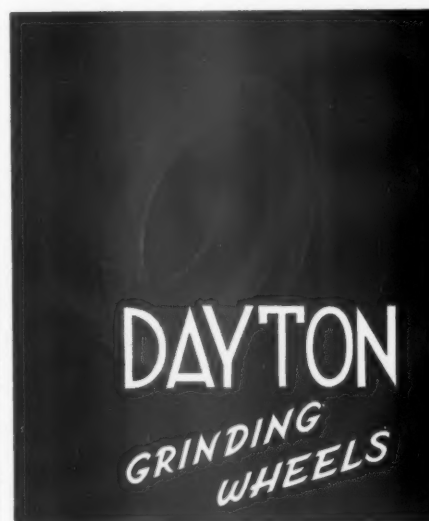
We'll be happy to cooperate. Send for the Metal Edge Portfolio, PLANNED PACKAGING. Ask us to send you personally the periodical METAL EDGE PACKAGER as issued. Drop us a line today.

**NATIONAL**  
*Metal Edge*  
**BOX COMPANY**  
1210 Callowhill St., Phila., Pa.  
STRONGEST PAPER BOXES by the  
MODERN PACKAGING METHOD

Airplane, have placed on the alloying elements a greater responsibility than ever before. Not only are alloys vital to tool steels needed for production, but in the engines, bearings, and even the structural parts of aircraft. An example of how far specialization may go is seen in the announcement of International Nickel Co. of a new "KR" monel, which adds machinability to the non-corrosive characteristics, and at the same time is non-magnetic. Without the non-magnetic quality, this metal could not properly fulfill certain functions in aircraft construction.

Recent advances in the science of producing alloy steel castings have provided the basis for important defense uses. The country's capacity for steel castings is still far from being fully employed, whereas capacity for armor plate is working 100% and the strain is so great that further facilities are being added.

General Steel Castings Co. and Blaw-Knox Co. each have developed processes for making "cast armor" suitable for use in the turrets of tanks, and orders for this purpose have already been placed. Castings so far developed use molybdenum, vanadium and other alloys. They now approach the hardness and toughness of forged steel, and some opinion feels that special alloy castings of today are better than many forged steels of a decade ago.



A finer grinding wheel preferred by leading firms. Specify any type, size, grain, bond, or grade.

**Simonds Worden White Co.**  
DAYTON, OHIO

Factories at Buffalo, Beloit, Cleveland, Dayton

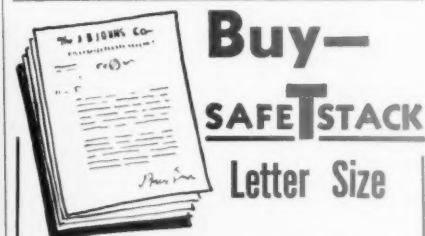
Somebody always hollers...



**Templar DURO Lead is an Almost UNBREAKABLE Pencil, WE SAY...**

... and TESTS YOU CAN MAKE will prove it! 25% to 75% stronger than similar 5¢ pencils... withstands pressure of over 250 times its own weight. Ask your regular Stationery Dealer for FREE TEST SAMPLES or Write,

**RELIANCE PENCIL CORP.**  
Manufacturers (Dept. P) Mt. Vernon, N. Y.



**INTERLOCKING FILE**

**\$ 2.57** F.O.B. Factory

(Quantity Discount)



Immediate  
Delivery  
from Stock

REMOVABLE  
FOLLOWER  
(Stays Put)  
**50c**

**The Steel Storage File Company**  
2216-18 W. 63rd St., Cleveland, Ohio

ORIGINATORS OF STEEL STORAGE FILES

# New PRODUCTS • IDEAS

## SMALLER AND LIGHTER MOTORS



■ **Small a-c poly-phase**, single phase, and d-c motors from  $\frac{3}{4}$  to 2 horsepower have been reduced in size and weight, the culmination of 12 years of advances in engineering art and materials of motor manufacture. Typical of the new compactness is the Westinghouse  $1\frac{1}{2}$  horsepower squirrel cage induction motor which

weighs 25 per cent less, and occupies 27 per cent less space than its prototypes of the same speed ratings. The motor industry agrees that the time is ripe for making these benefits available to motor users. Smaller motors can solve an old problem of machine builders—space. More power per cubic inch and per pound!

Changes in the NEMA standards affect weight, space, and size. Smaller motors are possible now because of the two major improvements; silicon steels have been greatly improved until now less motor iron is necessary to produce the same horsepower; better insulations make further reductions possible. New synthetics and new cloth insulations of higher dielectric strength have been developed which permit coil insulation, of the same quality as formerly, in a smaller space.

Westinghouse has just completed a broad program of motor re-design which covers a much wider scope of improvements than are called for by the new standards.

## DEAD STORAGE FILES

■ **More than a half million** cancelled checks can be accommodated in this dead storage file, occupying a floor space area of only  $54\frac{3}{4}$ " wide by 24" deep. There are 126 check-size files shown, stacked 21 high to  $89\frac{3}{4}$ ". They are individual steel filing cases with easy sliding steel drawers for permanent record storage. Each file is provided with a secure stacking device which inter-locks with every other one. A simple yet very effective side-locking clip fastens each file securely together so that stacks, no matter how high, will not slip or slide.

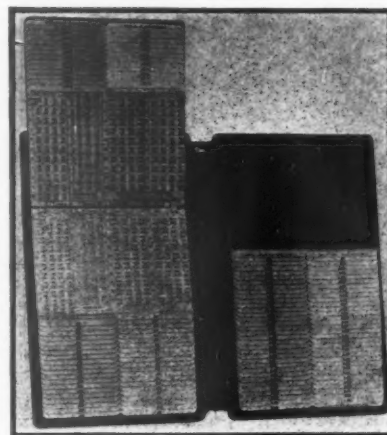
Product of All-Steel-Equip Company, Aurora, Ill.



## PAYROLL CALCULATOR

■ **A payroll calculator** that eliminates all figuring with its chance for error and all machine work with its need for verification has been perfected by Acme Visible Records, Inc. of Chicago, Ill. Utilizing all the time-tested advantages of visible records, the calculator reveals at a glance the total amount due any wage earner in regular pay and in over-time pay based on the requirement of time-and-a-half for all hours worked over forty in any week.

It is a compact, visible card record book which may be placed within easy eye-range of the clerk while in service and slipped into any desk drawer when not in use. It contains 261 individual wage rate tables, covering every period of service from  $\frac{1}{4}$  hour to 60 hours.



## CONTROLLED ABRASIVES

■ **A revolutionizing** step in the manufacture of steel shot and grit has been accomplished by National Metal Abrasive Co., Cleveland, Ohio. By this process what formerly was just standard shot and grit has now been so controlled that each size is given the correct processing in order to produce the best degree of toughness and hardness in relation to its size.

It is claimed that with the degrees of hardness—toughness controlled that entirely different results are obtainable. In fact, the shot and grit can now be bought to give the most advantageous results, just the same as it is possible to obtain steel for the respective uses to which it is to be placed.

## RUBBER BASE FLOOR COATING

■ **A rubber base** (chlorinated rubber) floor coating for wood or concrete floors has been announced by Truscon Laboratories, Detroit, Mich. Especially adaptable for use on cement basement floors because material is non-saponifiable; that is, it does not react chemically in the presence of alkali and moisture, which are usually present in basement floors, or floors laid on the ground.

When drying conditions are good, it will dry hard enough





## YOUR PRODUCTION GOAL IS **SAFE** WITH COL. CLIPPER ON THE JOB

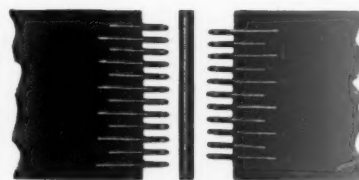
**STOP PRODUCTION DELAYS!** Clipper-Laced belt joints last 2 to 4 times longer!

This Extra Service Life is a result of the **BUILT-IN** lubrication of Clipper **LUBRIHIDE** Pins. Throughout their long service life these pins remain oil reservoirs, lubricating the constantly flexing joints.

**ONLY** Clipper offers you the protection of permanently lubricated belt joints. **LUBRIHIDE** Pins are packed as standard with all Clipper Belt Hooks.

**FOR YOUR OWN PROTECTION** — always order Clipper products by name!

**CLIPPER BELT LACER COMPANY • Grand Rapids, Michigan, U. S. A.**



Each hook is independent, assuring flexibility cross-wise as well as lengthwise of the belt. Double staggered points prevent damage to belt.



*When writing Clipper Belt Lacer Company please mention Purchasing*

## READY TO GO - Quicker

When They're  
**STANLEY**  
Steel  
Strapped



**THE STANLEY WORKS**

Steel Strapping Division - New Britain, Conn.

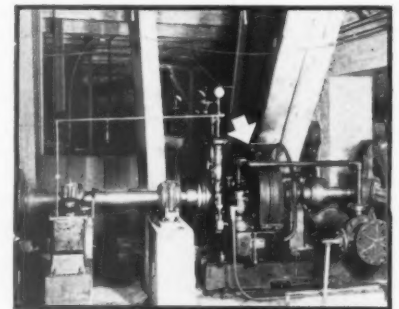
**STANLEY**

to walk on in a few hours. Will be oil and grease-proof in 24 hours, gasoline-proof, as well as resistant to most chemicals in 48 hours.

While recommended particularly for basement floors, Paratex is also the ideal decorative and dust-proof coating for sales and display rooms—for offices, hotels, hospitals, and public buildings—for printing plants, manufacturing establishments and, because of its chemical resistance, for laboratories, bottling plants, etc.

### HYDRAULIC COUPLING

■ Variable speed hydraulic coupling with a 150 hp. synchronous motor driving a paper machine is shown above. In the background, the belt take-offs to the various sections of the machine are shown. These are on a countershaft which is driven by a silent chain from the hydraulic coupling output shaft. The control valves about the manifold hold the speed of the countershaft constant by metering the oil in the hydraulic coupling to suit the load. Made by Hydraulic Coupling Division, American Blower Corporation, Detroit, Mich.



**IN A HURRY  
FOR SPROCKETS?**

**CALL CULLMAN**

Over 45,000 accurately made sprockets in stock for immediate shipment. Special sprockets made to order.

*Write for catalog*

**CULLMAN WHEEL CO.**

1342 Altgeld St.

Chicago, Ill.

*When writing advertisers please mention Purchasing*

### BALL BEARING LIFT TRUCK

■ A ball bearing lift truck capable of handling loads up to 1,000 lbs. can be used with or without skids. This is made possible by a sheet metal deck on the upper frame.

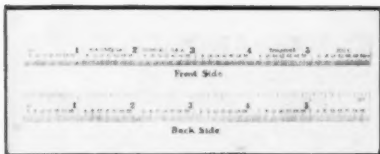
This truck is made in platform heights of 3½", 6", 7" and 9". The 3½" height is an innovation in the lift truck field and permits their use in light and small industries where they have been barred heretofore because of the cost or size of the larger units.

Skids, if their use is preferred, can be made for use with this half-ton truck, from undressed 2 x 4's of ordinary crating lumber at a cost of less than 20 cents a piece.

They are available in one width only which is 18" and they have a full 2" lift. Manufactured by Barrett-Cravens Company, Chicago, Ill.



### STEEL RULE



■ A flexible steel rule made in 6" length only has been added to their line by Brown & Sharpe Mfg. Co., Providence, R. I.

One side is graduated in 32nds on one edge and 16ths on the other and opposite side has 64th graduations on one side only. The rule can be quickly turned from

### NO PERCENTAGE!

There is no "percentage" in a Purchasing Agent's accepting sub-grade screw machine parts because the shop happens to be pushing him. We can make prompt delivery on turnings of all types, in steel, brass, bronze, nickel silver, aluminum and other metals up to 1" diameter.

### WRITE FOR ESTIMATES

*submitting blue prints or other descriptions and prices will be sent you promptly—all parts to carry the standard Newton quality guarantee.*

THE NEWTON MFG. CO., 11 Riverside Ave., Plainville, Conn.

**NEWTON**  
**SCREW MACHINE PARTS**  
(SEPARATE OR ASSEMBLED)



*Here's the easiest way to get your shaped wire*

Tell PAGE what you want—shape, size and analysis. That's all.

Maybe we can help, too, if wire you're using lacks qualities that might make it work up to better advantage. In that case, send PAGE a sample and tell us the problem.

And when you work a new product you will find that the quickest way to get the wire to fit your plans will be to take full advantage of PAGE experience with wire.

Just a glance at the shapes above suggest how well we can work with you—in wire of low carbon steels, high carbon steels and Stainless Steels.

*It's easy to remember to write*

**PAGE  
FOR WIRE**

### AND FOR WELDING ELECTRODES

see your local PAGE jobber—PAGE HI-TENSILE "F", a mild carbon steel electrode of the shield-arc type for fast single pass horizontal, vertical or overhead work. PAGE HI-TENSILE "G" shield-arc electrode for horizontal fillet welding. PAGE ALLEGHENY STAINLESS STEEL shield-arc electrodes give welds with weld metal that equals the Stainless you are welding.

PAGE STEEL AND WIRE DIVISION  
MONESSEN • PENNSYLVANIA

*In Business for Your Safety*



AMERICAN CHAIN & CABLE COMPANY, Inc.

*When writing advertisers please mention Purchasing*

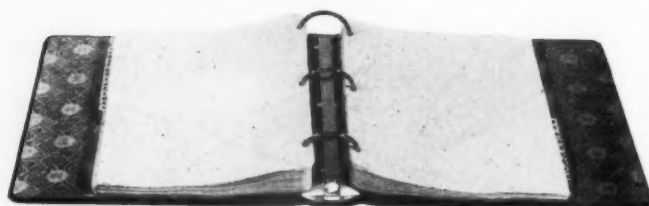


# Sheets don't "jam up" in

## Standard

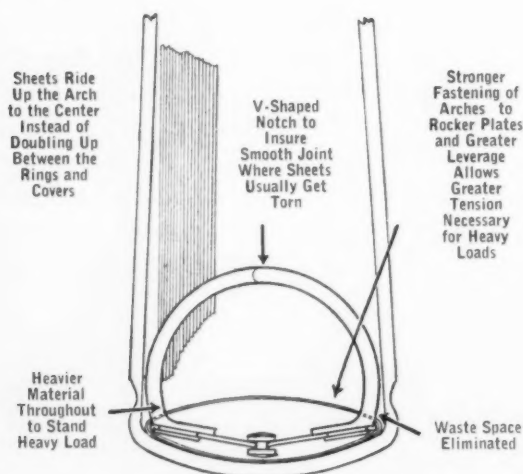
### BOORUM & PEASE

# G-L-I-D-E-A-R-C-H BINDERS



### EXTRA-CAPACITY BINDERS WITH THE EXCLUSIVE B&P ARCHED RING

★ In extra-capacity binders made with conventional round rings, there is a tendency for sheets to "jam up" when the binder is being closed. This objectionable feature is eliminated by the new "GlideArch" ring, which permits sheets to "ride" up the arc of the arch as the covers are closing.



Sheets positively cannot crowd between covers and rings—nor can they catch or bind on the rings. This eliminates punch hole tearing.

"GlideArch" Binders give you from 20% to 66-2/3% more sheet capacity than ordinary ring books—yet, thanks to the arched ring construction, the backbone of these covers is no wider than that of covers holding fewer sheets. "GlideArch" Binders come in 4 capacities: 1", 1 1/2", 2" and 2 1/2". Slide booster for opening, locking open, and closing.

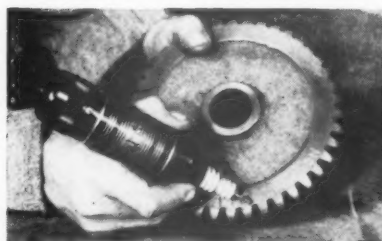


Manufactured by  
**BOORUM & PEASE COMPANY**  
General Offices: 84 Hudson Avenue  
BROOKLYN, NEW YORK

**SOLD BY LEADING  
STATIONERS EVERYWHERE**

one graduation to the other without turning end for end. The 32nds are numbered every 4th graduation and the 64ths every 8th graduation. The rule is approximately 1/2" wide and 1/64" thick.

### ENGRAVING AND MARKING SET



■ A practical tool room use for the engraving and marking set offered by Chicago Wheel & Mfg. Co., Chicago, Ill., is to mark piece part, serial or order numbers on tools, dies, jigs, fixtures or, as illustrated, on a gear.

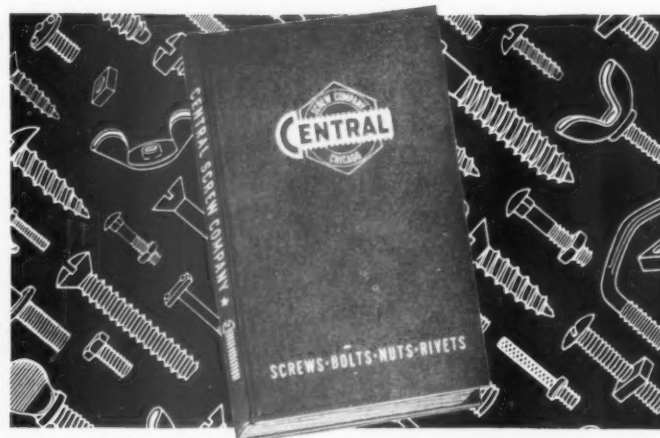
Equipped with especially designed accessories, it is ideal for marking and re-marking hardened steel, glass bottles, lead coated stock, painted surfaces. The unit is so light in weight, twelve ounces, that it can be easily transported to the work. It plugs in any electric light outlet. Indelible characters can be written as quickly as with fountain pen or pencil. The unit is low in cost and thoroughly reliable.

It is shaped to fit the hand—all moving parts, except the accessory being used, are completely enclosed for accurate, precision work. The tool room and die shop will find many uses for this versatile tool.

### HIGH-SENSITIVITY GALVANOMETER

■ A galvanometer more than three times as sensitive as previous galvanometers, has been announced by the General Electric Company. It is suitable for many applications where wall types were heretofore frequently necessary. Applications include temporary setups for factory and laboratory testing; permanent installations for testing instruments, material and

## HOW THIS BOOK CAN HELP YOU



★ More than a catalog . . . this valuable reference book should be in the hands of every plant executive who specifies or purchases Screws—Bolts—Nuts—Rivets, either standards from stock or specials to order.

We say more than a catalog, because this book contains, in addition to complete technical and pricing data on standard Screws—Bolts—Nuts and Rivets, hundreds of true-to-product illustrations of special products. These "Special" Items tell at a glance, the scope of the "cold-upset" and "rolled-thread" process by which Central can produce parts to simplify your assembly operations. Learn what is available. HOW TO GET IT FREE . . . It's easy . . . just write . . . your initials on your letterhead will do. No obligation. No cost. Your copy is waiting. Send for it today.

**CENTRAL SCREW COMPANY**  
3515 Shields Avenue  
Chicago, Illinois

When writing advertisers please mention Purchasing

apparatus for production, where rapid readings and minimum fatigue to the operator are essential; and for bridges and other apparatus requiring an external galvanometer.

The extreme sensitivity of this instrument is largely obtained by an arrangement of two fixed mirrors mounted inside the case, one on each end, thus increasing the effective light beam length. This gain in sensitivity is obtained at no sacrifice in sturdiness.

### FLUORESCENT LIGHTING UNIT

■ A complete fluorescent lighting unit, designed to incorporate their new 100 watt fluorescent lamps has been placed on the market by Hygrade Sylvania Corp., Salem, Mass. This



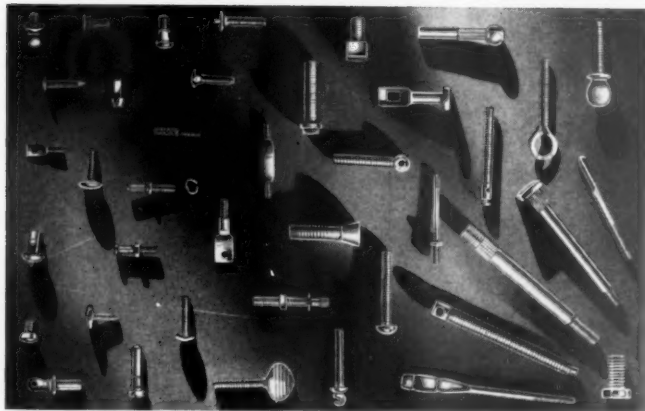
larger fixture comes complete with two 100 watt white fluorescent lamps, each 5 feet long. The development of this unit meets the demand for a more powerful light source for industrial applications where higher total lumens are required from each fixture.

It comes completely wired and ready to use. Is corrected for stroboscopic effect, and comes complete with lamps, starters, and their Dua-Lamp auxiliary. Corrected power factor.

Outside finish is French Gray. Highly efficient reflecting surface is porcelain enamel, which is easy to clean . . . economical to maintain.

Total wattage (including lamps and auxiliary) 230 watts. Operating voltage—units available for 110-125 volts, 60 cycle a.c. Lead wires supplied as standard equipment.

### SPECIALIZING in "SPECIALS"



WHEN NEXT you need fastening devices requiring special heads, threads or body shapes — and need them in a hurry — put the job up to PROGRESSIVE. Our "specials" department is geared to produce made-to-order parts, such as those illustrated, with time-saving speed — and to undeviating high standards of uniformity, thread accuracy and great tensile strength. Submit samples or specifications for quotations.

In addition to the cold upset manufacture of special fastenings, PROGRESSIVE is prepared to supply from stock all the standard Machine Screws and Nuts. Rivets and Studs supplied on special order. Catalog gladly sent on request. Address:

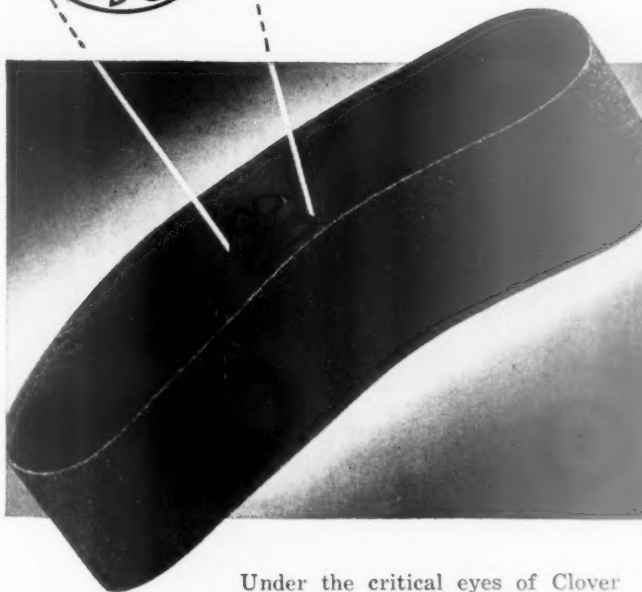
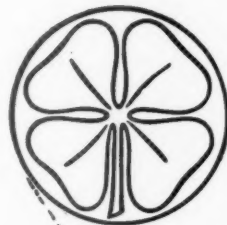


**The PROGRESSIVE MFG. CO.**  
TORRINGTON . . . CONNECTICUT

### Clover Products

## MUST EARN THE RIGHT

to this mark of  
**CLOVER QUALITY**



Under the critical eyes of Clover engineers and chemists, the manufacture of Clover Coated Abrasives is a routine of rigid control. Nothing is left to chance. And before the finished product can leave the Clover Plant, it must prove by actual performance tests that it can do the work for which it is recommended. Only in that way can it earn the right to carry the *Mark of Clover Quality*.

#### COATED ABRASIVES AT THE RIGHT PRICES FOR YOUR EVERY SANDING NEED

If your distributor cannot supply you, write us direct. Also ask us for informative Abrasive Manual, and for free working sample offer. Address DEPT. K

CLOVER MFG. CO., NORWALK, CONNECTICUT



WANT BETTER GRINDING AND LAPPING COMPOUND?  
DEMAND CLOVER—FAMOUS FOR 38 YEARS

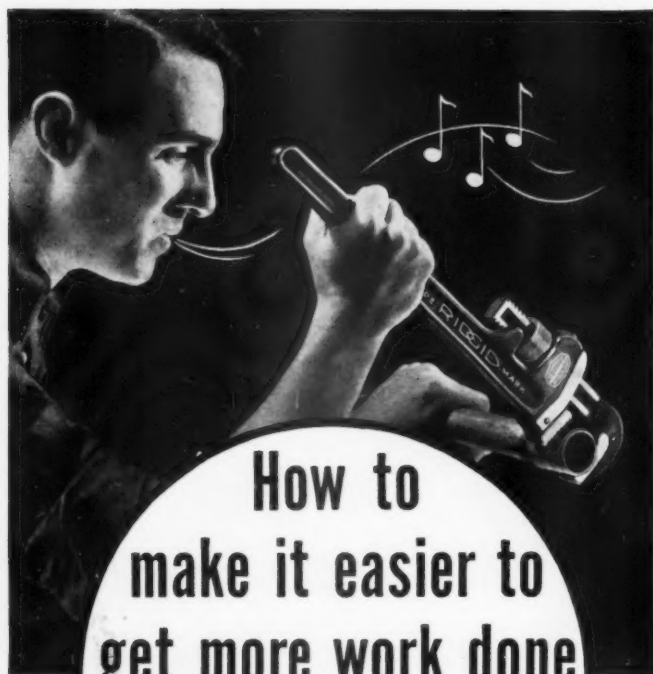
Supplied in eight grades, there is a Clover Compound for your every need. Look for the famous green can.

**CLOVER**  
*Coated Abrasives*

Easily Identified by Color-Striping  
and the Famous Clover Trade Mark

QUALITY ABRASIVES SINCE 1903

*When writing advertisers please mention Purchasing*



How to  
make it easier to  
get more work done  
in 1941

...Easier-working  
**RIDGID**  
Pipe Wrenches save  
drudgery and time—  
and cut your costs!

THE country-wide demand this year is to produce *more and faster*. You can do your share, without extra strain on your men, by use of tools that save effort—like **RIDGID** Wrenches. The full-floating chrome molybdenum jaws grip without slipping, let-go without jerk. Pipe scale on hookjaw means quick-setting to pipe, adjusting nut in open housing spins easily in all sizes, 6" to 60". Comfort grip alloy I-beam handle, whole tool is balanced for effortless work. And that guaranteed housing practically ends waste of time and money making repairs. Get the work done but protect your men—buy **RIDGID**s at your Supply House... today!

THE RIDGE TOOL CO., ELYRIA, OHIO

**RIDGID**  
WORK-SAVING PIPE TOOLS



No More  
Housing  
Repair  
Expense

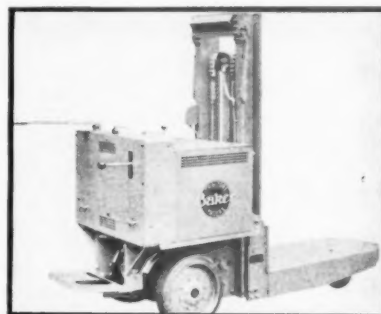
## FLUORESCENT UNITS

■ These **wired and unwired** fluorescent units are available in unit lengths for any specified size and



number of fluorescent lamps, with or without Alzak reflectors of either concentrating or diffusing types. Wired units are now supplied as standard with white plastic lamp holders, with channel and covers aluminum finish. New controls, designed to fit within the channel make a completely self-contained installation. Available fittings include hangers for ceiling, wall or special applications. Made by The Wiremold Company, Hartford, Conn.

## INDUSTRIAL TRUCKS



■ The latest addition to the line of industrial trucks manufactured by the Baker Industrial Truck Division of The Baker-Raulang Company, Cleveland, Ohio, is its Hy-Lift truck which is available in 4000-lb. capacity. This new model has been designed for operation in narrow aisles and

congested areas, and has the following features: Efficient hydraulic lift. Lighter weight without sacrifice of strength or ruggedness. Shorter overall length. Accessibility—all controls and hoists come grouped in convenient control panel. Absolute control of hoisting and lowering speeds.

**NEW!**

**EASIER  
POURING!  
NO  
SPILLING!**



## JUSTRITE SPECIAL SAFETY FILLING CAN



WRITE FOR  
COMPLETE DATA!

**JUSTRITE MFG. CO.**

● Where gasoline or other flammable liquids are poured into fuel tanks or other receptacles, this new type filling can reduces the fire hazard. Its flexible spout does away with funnels and makes pouring easier without any splashing or spilling. Listed by Underwriters Laboratories, Inc., it is a quality-built Justrite product designed by men who know how to give you maximum safety. Ask your mill supply jobber to show you this new Justrite Safety Product!

2091 N. Southport Ave.  
Chicago, Illinois



### SKID PLATFORM

■ A line of corrugated metal products headed by the Steelwave Skid Platform has been placed on the market by The Service Caster and Truck Company, Albion, Mich.



Featuring a principle of "strength without weight," the manufacturer lists as advantages (1) greater lightness and strength due to use of light gauge metal corrugated two ways—crosswise in the deck and lengthwise at right angles to the deck in the side angles, (2) greater safety to loads and workmen due to rounded corners, (3) greater resistance to wear from jamming, loading and impact under heavy service, (4) no possibility of swelling, shrinking, warping or buckling from atmospheric conditions, (5) unaffected by standing loads, and (6) no splinters or broken top-boards possible.

These skids are fabricated from light sheet metal, 16 to 12 gauge, according to required capacity. Deck and side angles are die formed and legs are of 5/16" x 1 1/2" flat steel. All parts are permanently fused by electric welding.

### TOOL STORAGE

■ Protect valuable tools with tool storage equipment provided by Lyon Metal Products, Inc., Aurora, Ill. This provides visible, accessible storage, reduces loss and damage, insures fast service, permits quick, easy rearrangements, save labor and floor space, and give lifetime service.

A complete line is available for every tool storage purpose. The inserts are complete, interchangeable units. Comes in green baked enamel finish.

### Keeping in Step With Business!

## CESCO - THE MODERN, EFFICIENT LINE OF BINDERS AND FORMS

The increased tempo of business today—all signs pointing to the biggest business boom in more than a decade! New business problems—more records to keep—and CESCO is ready with new methods, new forms, new systems—to increase your record-keeping efficiency.

Complete, up-to-the-minute, the CESCO line of record-keeping equipment has the proper binders, forms and systems for every department of every business!

Buy—CESCO products—the complete, modern line of record-keeping equipment. Some of our stock items are: Transfer Binders, Post Binders, Ring Books, Visible Record Equipment, Catalog Covers, etc.—Plus—a complete line of Commercial Forms for all business needs.

**FOR THE CORRECT ITEMS  
AT THE CORRECT PRICE  
— ORDER FROM CESCO —**

Send for Catalog and National User's Discount Plan.

**THE C. E. SHEPPARD CO.**

44-05 Twenty First Street

Long Island City, New York



## Tip to Profit-Wise Buyers— Speed Your Assemblies in 1941 with TRIPLEX Threaded Fasteners

Winning in the battle to produce this year calls for *strategy in procurement* as well as in production. Hook up with TRIPLEX for your supplies of Threaded Fasteners—cap and set screws, bolts and nuts—where modern *controlled* manufacturing is teamed with a fast moving shipping department.

TRIPLEX maintains quality through exacting steel specifications, strictly supervised production, careful inspection. Correct bolt and screw practice is rigidly observed—accurate deep threads, clean-cut points, properly formed heads. Check with TRIPLEX for time-and-money-saving Threaded Fasteners. Rush your want list today for quick reply on prices and delivery dates.

**THE TRIPLEX SCREW CO.**

5331 Grant Avenue, Cleveland, Ohio

# TRIPLEX

**CAP AND SET SCREWS, BOLTS, NUTS AND RIVETS**

★ Millions Sold . . . Used in Every Industry ★

## "WE STEER CLEAR OF 'DOUBTFUL' SCREWS ON ALL DETECTO SCALES!"



For secure assemblies, JACOBS BROS., INC.  
depends on Parker-Kalon Self-tapping Screws

MANUFACTURERS who use Parker-Kalon Self-tapping Screws in their assemblies agree that it certainly pays in time, money and labor saved to avoid "doubtful" screws... screws that "gum up the works" by breaking or stripping... that start crooked or fail to draw up tight. Only a few such screws are needed to run up assembly costs.

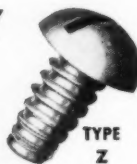
Order Parker-Kalon Self-tapping Screws and you'll have no such troubles. For these Quality-Controlled Screws are products of Parker-Kalon's 25 years' experience in screw manufacture... and measure up to the high standards developed and maintained by Parker-Kalon's famous \$250,000 Research Laboratory. This is your iron-clad Guarantee that Parker-Kalon Screws will work right... *always*. Parker-Kalon Corporation, 202-204 Varick Street, New York, N.Y.



HEX-  
HEAD

*Quality-Controlled*

TYPES, SIZES, HEAD-STYLES  
FOR EVERY ASSEMBLY OF  
METAL OR PLASTICS



TYPE  
Z

SOLD ONLY THROUGH RECOGNIZED DISTRIBUTORS

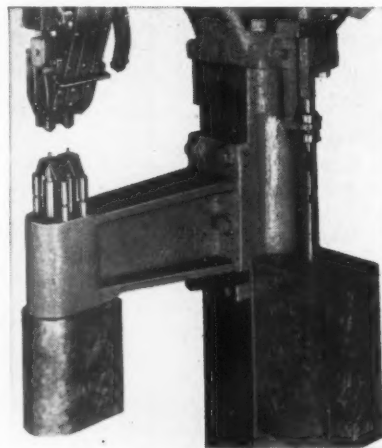
**PARKER-KALON**  
HARDENED  
*Self-tapping Screws*

When writing advertisers please mention Purchasing

## PRODUCTION RIVETING MACHINE

■ This automatic multiple rivet-setter is electrically actuated by the positioning of the work over the anvils. It requires no foot motion by the operator and will produce a higher production speed and maintain a better, more uniform quality of work.

In the two-rivet model illustrated, the operator places the work over the projecting parts of the anvil and brings the pieces down, exerting a slight pressure on the work rests to close an electrical circuit through a Micro Switch in the housing below. This trips a solenoid which engages the flywheel clutch, feeding and setting the rivets at a single stroke of the machine. If the work is not positioned properly, the switch cannot be closed and the rivets will not be fed. This guards the safety of the operator and reduces spoilage to a minimum. Manufactured by Chicago Rivet & Machine Company, Chicago, Ill.



## OIL-IMMERSED DISCONNECTING SWITCH

■ Recognizing the demand for a disconnecting switch which can be applied safely in explosive and corrosive atmospheres, the General Electric Company has developed and placed on the market an oil-immersed disconnecting switch. It is available as an enclosed triple-pole, single-throw, group operated disconnecting switch in the 5000-volt, 600-ampere rating. It is



★ Flying particles, sparks, splashes, sprays of paint, showers of liquids, chips of metal are costly... sometimes deadly hazards. You lose production every time an unprotected worker squints, dodges, slights his work or slows his pace in instinctive self-defense. You GAIN when you provide CESCO PROTECTION against these common hazards.



Cesco No. 750  
FACE SHIELD

Light weight, comfortable, strong and rigid. Tilting, non-inflammable plastacele window 4" x 9". Adjustable headband. Deep visor permits use of goggles or glasses.



◀ CESCO PAINT SPRAY MASK.. Protects both head and shoulders. Wide vision plastacele window slides out for easy cleaning. Air tube permits compressed air ventilation if desired. Choice of 3 models for every purpose.

Write for Complete Details and Illustrated Circulars

**CHICAGO EYE SHIELD CO.**

2365 WARREN BLVD.  
CHICAGO, ILLINOIS

for use indoors or outdoors as an isolating device for oil circuit breakers or motor starters in oil refineries, grain elevators, chemical plants, and similar applications. Applications have already been made at three leading oil refineries.

### MAGNETIC MOTOR STARTERS

■ These magnetic motor starters are designed by Colt's Patent Fire Arms Mfg. Co., Electrical Division, Hartford, Conn. for across-the-line starting of single and polyphase squirrel cage induction motors, and as primary control for wound rotor induction motors.

Automatic motor starters are used on many small motors and on practically all large motors as they allow automatic control, local or remote control or control from two or more locations. They also provide low-voltage release and no-voltage protection, as well as protection against damaging overloads to motors. A few applications include conveyors, compressors, stockers, pumps, ventilators, motor generators, machine tools, printing presses, looms, etc.

One important feature of the starters is the three-point ball-bearing suspension of the movable electro-magnet, assuring a floating action that minimizes friction and guides contacts smoothly into correct alignment. The magnet operates vertically and cannot close accidentally by vibration or shock.

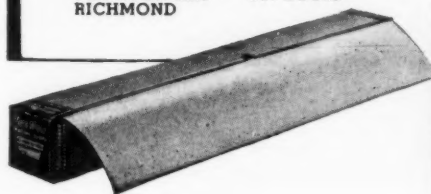


In testing our tracing cloth thousands of samples have been placed in the hands of draughtsmen and then returned to us with reports of use results. On the edges of these returned sheets we frequently find unusual drawings done evidently while telephoning, or while otherwise occupied. The above is an example of such a "Doodle" drawing. The three lines above that do have a meaning read, Micro-Weave All American Tracing Cloth — and they mean a tracing cloth, in every way, by every test and in practical use, absolutely satisfactory and dependable.

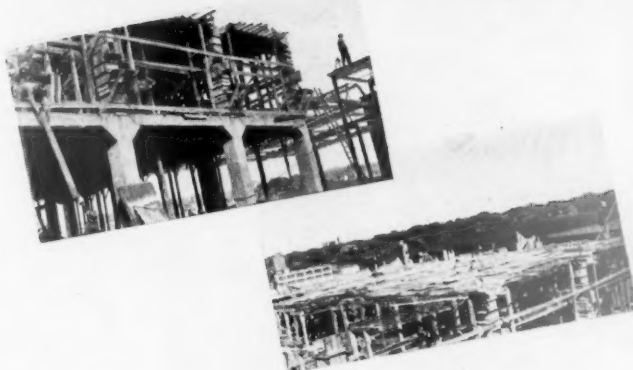
THE HOLLISTON MILLS, Inc., Norwood, Mass.

Companion Product: Holliston Photo Cloth

BOSTON • NEW YORK • CHICAGO  
PHILADELPHIA • ST. LOUIS  
RICHMOND



## PREPAREDNESS FOR 1941 DEMANDS



For over 95 years, RB&W has met the demands of industry—during other armament periods and manufacturing peaks where quality and service were essential to national emergency.

Since 1845, RB&W has answered each call through added plant facilities and increased production—yet ever kept in mind those fair policies and co-operative trade relations due to old customers, as well as new, and continued to build good will while meeting increased demands.

In 1941, RB&W is again prepared. New buildings and additional equipment have been added, and are still being added, to three large and strategically located plants. Immense supplies of raw materials have been acquired, and reserves of large, well assorted stocks of finished products are being maintained.

Thus, as usual, RB&W is in an enviable position to help those needing stable facilities for EMPIRE Bolts, Nuts, Rivets, and other Threaded Industrial Fastenings.



**RUSSELL, BURDSALL & WARD**  
BOLT AND NUT COMPANY

PORT CHESTER, N. Y. ROCK FALLS, ILL. CORAOPOLIS, PA.



**GARLOCK**  
GIVES YOU **ALL 3**

1. Dependability

2. Long Life

3. Economy

**T**HESE three qualities are essential for superior packing performance: 1. *Dependability* even under the most severe service conditions; 2. *Long Life* that prevents frequent shutdowns for repacking; 3. *Economy* that keeps down maintenance costs. Garlock gives you *all three*. For outstanding service, standardize on **GARLOCK!**



THE GARLOCK PACKING COMPANY

PALMYRA, NEW YORK

In Canada: The Garlock Packing Co. of Canada Ltd., Montreal, Que.

**Garlock**

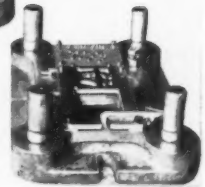
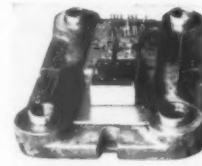
THE STANDARD  
PACKING OF THE WORLD

### AIR HARDENING DIE STEEL

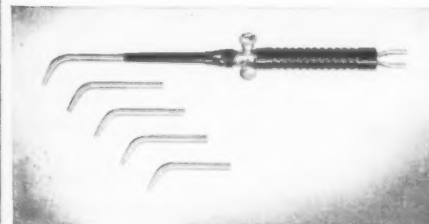
■ An improved alloy steel, known as special air hardening die steel, has been developed by the Jessop Steel Co., Washington, Pa.

It is a chromium-molybdenum-vanadium type steel developed for use where the initial cost of the tool or die must be held to a minimum.

It is non-deforming, easily machined, extremely tough and has a wide hardening range. It may be hardened and tempered in either oil or air. Its non-deforming qualities is demonstrated by its use in the die illustrated. This die, which has 27 holes and six large punches, it used to punch out clock frames—extreme accuracy being essential. There was no measurable change in this die after heat treatment.



### AIRCRAFT WELDING TORCH



■ A feather-weight aircraft welding torch, weighing only 5 ounces, has been announced by The Dockson Corp., Detroit, Mich.

In addition to extreme ease of handling, it features a duralumin tip tube and a fibre handle. This fibre handle insures a cool grip at all times, while the

**Upset  
forgings**



Upset forgings provide maximum economy where large quantities of stress resistant parts are required. Wire, phone or write for details.

**KROPP**

KROPP FORGE COMPANY

World's Largest Job Forging Shop  
5315 W. Roosevelt Road, Chicago, Ill.  
Representatives in Principal Cities



When writing advertisers please mention Purchasing

conveniently located spring tension torch valves make it easy to adjust the torch with one hand during operation.

It is especially designed for top-speed production on sheet metal and light welding jobs. There are 6 "smooth-bore" copper tips which may be changed to fit the job.

### SAFETY FILLING CAN



■ For all purposes where gasoline or other flammable liquid must be poured with minimum fire risk from the container into a fuel tank or other receptacle, use the special safety filling cans made by Justrite Manufacturing Company, Chicago, Ill. It does away with funnels and spilling and splashing.

The flexible spout makes it easy to pour without spilling. The air vent built into the pouring spout valve relieves all "back-pressure" while the contents is being poured, and assures a steady, even flow.

Metal hose can be turned in any direction and is removable. Three interchangeable sizes are available,  $\frac{1}{2}$ ",  $\frac{3}{4}$ " and 1" outside diameters. Comes in 5, 10, 15 and 20 quart sizes.

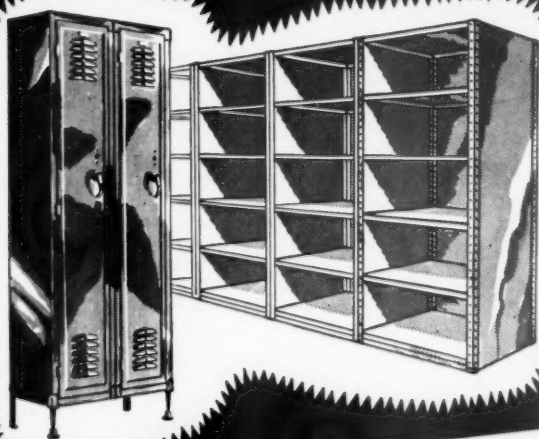
### TELEPHONE PRIVACY

■ An ingenious device made of molded plastics and designed to snap over the mouthpiece of an ordinary handset telephone making conversation inaudible to others in the room, has been announced by Telephone Devices Co., Inc., New York, N. Y.

It is completely molded of plastics except for the acoustical sound absorption material within the exhaust chamber.

# Medart

STEEL LOCKERS and STEEL SHELVING



WRITE FOR CATALOGS

**NEW LOW PRICES**

**FRED MEDART MANUFACTURING CO.**

3539 DE KALB ST. ST. LOUIS, MO.

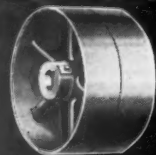
Sales Engineers in All Principal Cities • Dealers Everywhere

## LINK-BELT PULLEYS

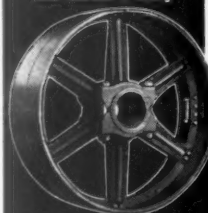
### A Type for Every Service



Solid Cast Iron Single Arm Pulley



Cast Iron Tight and Loose Pulley



Steel Split Pulley

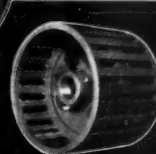
● A complete line of Welded Steel Conveyor Pulleys, Cast Iron and Pressed Steel Pulleys of all types, solid or split, single or double arm or plate center, with internal or external flanges on rim, with jaw clutch hubs, with shear pin hubs, and with other special features—available for every conveying and power transmission service.

Data on the complete line will be found on pages 598 to 617 of General Catalog No. 800 and Power Transmission Equipment Book No. 1600.

### LINK-BELT COMPANY

Chicago, Indianapolis, Philadelphia, Atlanta, Dallas, San Francisco, Detroit, Boston, Seattle, Los Angeles, Portland, Ore., Toronto. Offices and Distributors in Principal Cities.

6183



Cast Iron Slat Pulley



Solid Welded Steel Conveyor Pulley

## CHICAGO MOUNTED WHEELS OF V/T SUPER BOND



### 150% LONGER LIFE

V/T Super Bond is the most important development in mounted wheels in 30 years. Does work faster and better. Won't ridge on welds, sharp corners, sinking dies, barbering, etc.

**TRIAL WHEEL**—Tell us kind of job, type of equipment you use and size wheel and we'll send you one to try out.

**FREE CHART**—A Wall Chart 22 x 15" shows actual size and shape of every standard Chicago Mounted Wheel. Ask for one.

**HI-POWER GRINDER**—For jobs beyond the capacity of the Handee, nothing compares with the HI-POWER in vibrationless performance, precision and stamina. 17,000 r.p.m. with ample power to drive a 2½" diam. wheel. Wt. 3 lbs. In wood case with accessories, \$35.00.

**HANDEE TOOL OF 1001 USES**—A small "power house" that can be used wherever there is an electric outlet. Grinds, drills, polishes, cuts, routs, carves, sands, saws, sharpens, engraves, cleans, etc. Uses 300 accessories. Weighs 12 oz. 25,000 r.p.m. \$18.50 postpaid with 7 Accessories.

Send for catalog of complete line.

**CHICAGO WHEEL & MFG. CO.**

Makers of Quality Products for 40 years.

118 S. Aberdeen St.

Chicago, Ill.




10 DAYS FREE TRIAL

When writing advertisers please mention Purchasing



● Short, stubby links bridge the corners...without gouging and bending stress

★ Herc-Alloy Steel Chain with the exclusive patented "Inswell" welds is proving its superiority in every type of application. Fabricated from a special analysis, heat treated steel, the sturdy short, stubby links bridge square corners (see photograph above) minimizing bending stress and gouging... adding extra chain life and economy even under the most punishing assignments.

 **25%** extra margin of safety and wear

Note the extra "swell" of steel at the weld of Herc-Alloy steel chain. With 25% extra metal at the point where strength is vital, these "Inswell" welded links give extra safety to men and materials... and longer chain life. Specify and insist on Herc-Alloy—it's your assurance of extra dependability, economy and safety.

Whether or not you need chain today... get the facts. Complete catalog on request and trained CM engineers are available for consultation. Write:

**COLUMBUS-MCKINNON**  
*Chain* CORPORATION

(Affiliated with Chisholm-Moore Hoist Corporation)

136 FREMONT AVE.

TONAWANDA, N. Y.

Branch Offices: NEW YORK • CHICAGO • CLEVELAND

Light in weight, the device attaches to the telephone in an instant and becomes an integral part of the instrument. It affords phone-booth privacy to the executive who must discuss confidential matters over the telephone while others are seated at his desk or within hearing range. A simple, but highly efficient arrangement of sound-absorptive material within the exhaust chamber of the device "sponges up" sounds which normally reflect back into the room, making ordinary conversation inaudible to persons seated only a few feet away. It tends to make telephone messages more accurate and briefer.

#### CARBIDE TOOL MATERIAL



■ A straight tungsten carbide grade of Kenametal which is approximately 15% stronger than any other tungsten carbide of the same hardness, has been placed on the market by McKenna Metals Co., Latrobe, Pa.

This carbide tool material has a hardness of 92.0 Rockwell A and strength of 223,000 lbs. per sq. in. (transverse rupture test), as compared to a hardness of 91.8 Rockwell A and a strength of 190,000 lbs. per sq. in. for a comparable competitive brand of tungsten carbide.

It has the same thermal conductivity as other tungsten carbide tool materials, namely, 0.19. Due to its high thermal



Why stick your chin out by buying sealing tape just because it bears a lower price tag? Your shipping room will mutter under their breath and damage claims will mount noticeably. Use RED STREAK SEALING TAPE! It seals faster and easier, sticks tighter, adheres permanently. You'll be surprised at its low price... write today for your free sample roll.



RED STREAK  
TAPE

The BROWN-BRIDGE MILLS Inc.  
TROY, OHIO



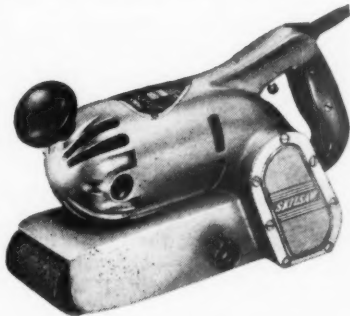
RED STREAK  
SEALING TAPES



conductivity, together with its unusually high wear-resistance, it is particularly applicable to the machining of hard, crumbly materials such as cast iron, "transite" pump, Bakelite, porcelain, hard rubber, glass, casein—as well as silicon aluminum, hard bronze and other non-ferrous materials.

### COMPACT BELT SANDERS

■ A lightweight  $2\frac{1}{4}$  inch belt sander has been introduced by Skilsaw, Inc., Chicago, Ill. "Zephyrplane Junior," being small and compact, is a highly efficient machine for home craftsmen, for boat owners and in industrial art classrooms. It is a time and money saver in lumber yards when used for "clean-up" work on sash and doors and also in cabinet shops where it is used on many "final finish" operations. In spite of its low price this sander has many unusual "big-tool" features.



Among these features are a die-cast aluminum frame for lightness and strength, ball-bearing construction and a powerful sturdy universal motor. Other features of safety and convenience are a bakelite handle for cool comfort, a safe trigger-type momentary switch and a patented "touch-control" lever which permits quick changing of belts. The belt travels at a speed of 600 sur. ft. per minute, is kept uniformly taut by a coil spring and can be easily centered by a simple adjustment. A variety of belts are obtainable adapting the tool perfectly for use on wood and metal, for removing varnish and for polishing.

## Step up Production with this "3rd Comfort" Feature

"Height Always Right"

Here is a stool for factory or office that instantly overcomes the wide variation in stature of workers. Each operator lifts the seat of stool to most comfortable working height and instantly it is self-locking. Lifting seat to full height releases for complete lowering.

**EVER-HOLD**  
TRADE MARK

Automatic-Adjustable  
Stools and Chairs

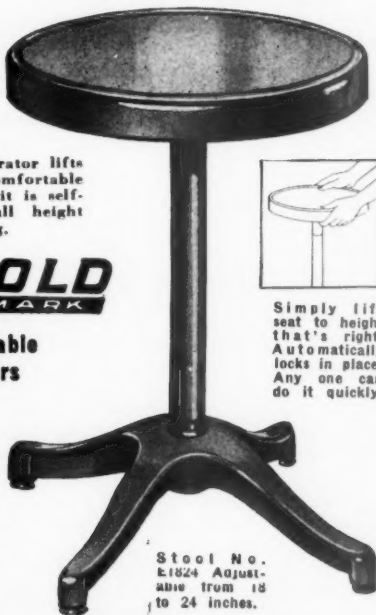
contribute very definitely to increased production because they alone give that important 3rd comfort feature "Height Always Right." You expect seat comfort and back comfort of course—Ever-Hold has them—but in addition you get this 3rd comfort feature—"Height Always Right."

For Catalog, Prices and Details write—

**Kewanee Mfg. Co.**  
LABORATORY FURNITURE EXPERTS

C. C. Campbell, Pres. and Gen. Mgr.  
5006 S. Center St., Adrian, Mich.

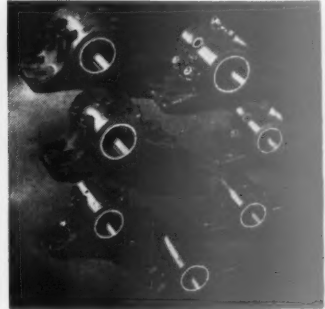
Leaders in the Manufacture of Laboratory and Library Furniture Since 1905



Simply lift seat to height that's right. Automatically locks in place. Any one can do it quickly.

Stool No. E1824 Adjustable from 18 to 24 inches.

## LINK-BELT BABBITTED BEARINGS



### Up-to-the-Minute Designs

● Simple . . . dependable . . . economical . . . Link-Belt babbitted and bronze-bushed bearings are designed for modern supporting structures—for today's requirements. Scientific metal distribution, in compact, well-proportioned units, provides maximum strength and durability with minimum weight and bulk.

The broad selection includes solid and split bearings grease lubricated or self-oiling, for the full service range. Popular sizes carried in stock.

We also carry a complete line of anti-friction roller and ball bearing units.

### LINK-BELT COMPANY

Chicago, Indianapolis, Philadelphia, Atlanta, Dallas, San Francisco, Detroit, Boston, Los Angeles, Seattle, Portland, Ore., Toronto. Offices and distributors in principal cities.

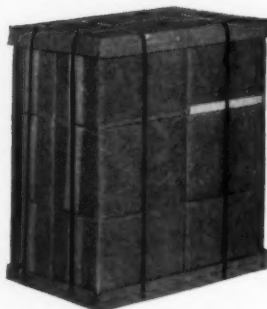
8103

**BUILD TO EXCEL WITH  
LEE-BUILT SPRINGS**

**LEE SPRING CO., INC.**  
30 MAIN STREET BROOKLYN, N.Y.

# HOLD UNIT COSTS **DOWN!**

with  
**SIGNODE**

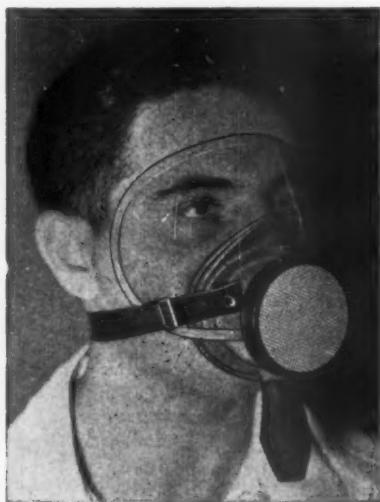


**A TYPICAL EXAMPLE**  
Bundling unit cartons of incandescent lamps, with Signode, as shown, eliminated master carton and saved the shipper 37% over old method.

● Immediate savings in the shipping room, as an offset to some part of rising unit costs on the production line, are Signode's contribution to industry in this year of rapidly growing production demands. In just a few days the Signode System of Tensional Steel Strapping can be working to protect profits—offsetting increased production costs with up to 40% savings in packaging materials—up to 75% saving in carloading costs—while providing added protection to products in transit.

**Available Immediately**—Signode savings are available now—in no more time than it will take a Signode man to recommend the right Signode applications to your products and problems. Write today for full details.

**SIGNODE STEEL STRAPPING CO.**  
Chicago, Ill.: 2602 N. Western Ave.  
Brooklyn, N.Y.: 371 Furman St.  
San Francisco, Calif.: 454 Bryant St.  
**40 OFFICES THROUGHOUT UNITED STATES AND CANADA**



## Additional Protection for EYES

### PULMOSAN EYESHIELD RESPIRATORS

Combine Plastic Eyeshield with Pulmosan Respirators

Get the **ORIGINAL** with these features

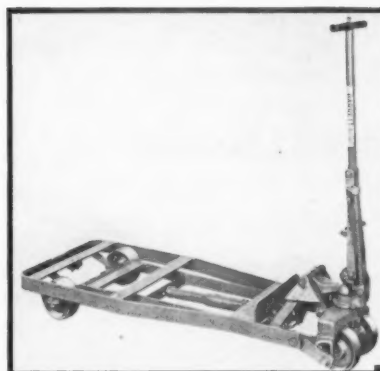
1. Edges of Eyeshields bound with Felt, to prevent scratching the face.
2. Eyeshields fit closely to face; no twisting or bending; non-fogging, almost airtight.

■ In addition to protecting lungs against dangerous dusts, fumes, splashes or paint sprays, Pulmosan Eyeshield Respirators now also protect the eyes. Sturdy plastic eyeshield, weighing only ½ ounce, arches over respirator and fastens with headband snaps. Snug, comfortable, full-vision protection. Eyeshield easily removed or replaced. Pulmosan Eyeshield Respirators are available in many models. Write for descriptive leaflet.

**PULMOSAN SAFETY EQUIPMENT CORP.**

Dept. P, 176 Johnson Street, Brooklyn, N. Y.

## MULTIPLE STROKE LIFT TRUCK



■ This "Light Boy" lift truck introduced by Barrett-Cravens Company, Chicago, Ill. has a capacity of 2,500 lbs. It has a full lift of 3" accomplished with either four full or thirteen short strokes. Ball bearing wheels are standard equipment. There are four wheels in all. The front wheels are wide-spread for stability. Fewer parts through-

out are claimed for this new model.

It is made in sizes ranging from 30" to 144" long in multiples of 6", with either 6", 7", 9" or 11" diameter wheels; and in widths of 18" and 24".

Another model named the "Pay Boy," has the same general specifications, the same 3" lift but has a capacity of 3,500 lbs. Both types of lift trucks have angle lift and a spring handle hold-up.

## MARKED SHIM STOCK

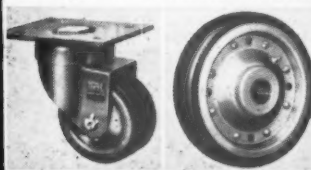
■ Thin shim stock supplied in slotted cartons by Laminated Shim Company, Inc., Glenbrook, Conn., now is furnished marked in inches on its edge—from 0" to 100", with half-inch subdivisions throughout the 100 - inch length—at no extra price.



Therefore the precision-thin metal can be conveniently pulled through the carton slot and cut off to the exact size required. Not only is waste avoided but the markings also act as a telltale signal, indicating when the roll is about used up. These handy packaged rolls of brass or steel shim stock (6" wide and available in .001 to .015 thicknesses) facilitate shim stock storage, prevent the stock from being mislaid and save time in use. Cut fingers are avoided and handling made easier by the slot-dispensing feature.

## DARNELL CASTERS & E-Z ROLL WHEELS

Save money, floors, time and equipment. All these advantages are yours when you install Darnell Casters.



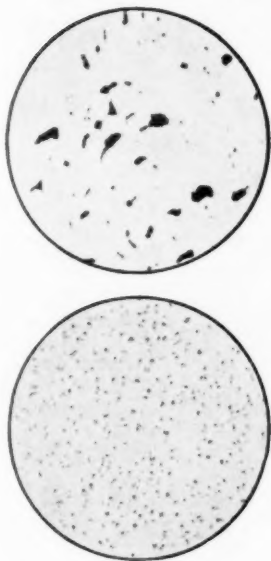
*Different & Better*

Whether for light, medium or heavy duty use, Darnell Casters and Wheels are built to take punishment.

Yet, Darnell Casters are responsive—will swivel and roll easily under heaviest of loads.

**DARNELL CORPORATION, LTD.**  
BOX 4027, STA. W. LONG BEACH, CALIF.  
35 N. CLINTON, CHICAGO — 24 E. 32ND, NEW YORK  
DARNELL CORP. OF CANADA LTD. TORONTO, ONT. CAN.

## BEARING BRONZE



■ A revolutionary new bearing bronze produced for a wide range of bearing and seal applications, has been developed by the Monarch Alloys Company of Ravenna, Ohio. It is alloyed in various high-lead combinations. Its elements are combined in a hermetically sealed crucible which protects them from contact with furnace gases or oxygen while they are melting, and the resultant alloy is water-cooled by means of a secret process.

Bearings made of this metal will run with less friction, heat and noise than those made of ordinary high-lead bronze. This is due to the fact that hard, abrasive tin and lead oxides are prevented in the melting and casting process. The metal is more heat resistant. Tests show

the metal to be superior in hardness and compression resistance to any other high-lead, tin and copper alloy.

## SELECTOR CONTROL

■ A selector control for maintaining constant temperature and humidification and dehumidification control in process air conditioning has been announced by the General Electric Company, Schenectady, N. Y. It is also entirely suitable for automatic year-round comfort control. This new selector-control unit, when used with a three-wire, "floating" type thermostat or humidistat, provides close control of temperature or humidity under widely varying conditions.



Outstanding features of the new device include a synchronous timing motor to assure accurate timing; control relays for single-pole, double-throw switching; conveniently located high voltage and low-voltage terminals, and, a trim, aluminum-finish case.

## USE CAST METAL LETTERS AND FIGURES

Standard in foundries and pattern shops for over seventy-five years. Ornamental types made of highly polished aluminum or bronze for signs on buildings and truck bodies.

Available in stock designs or made to order from your sketches.

**H. W. KNIGHT & SON, INC.**

1 NORTH LANE

SENECA FALLS, N. Y.

# LINK-BELT SPROCKETS

★ 25,000 ALWAYS IN STOCK—CUT OR CAST TOOTH ★



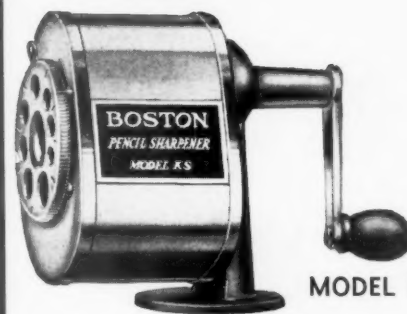
● Get popular sizes of cut and cast tooth sprockets that fit—right from stock—bored and keyseated to your order, ready to install.

Every Link-Belt sprocket is carefully fitted to the chain. This final step in the highly developed Link-Belt process of sprocket manufacture eliminates the "break-in" period—a period of accelerated wear on the chain, as well—yet it costs you nothing extra.

We also can give you quick and efficient service on cut and cast tooth gears.

**LINK-BELT COMPANY**, Chicago, Indianapolis, Philadelphia, Atlanta, Dallas, San Francisco, Detroit, Boston, Los Angeles, Seattle, Portland, Ore., Toronto. 8101

## "KS" TO THE RESCUE



MODEL KS



KS—the famous Boston Pencil SHARPener pictured here—may not save lives but it certainly saves pencils! And a pencil-saver is a money-saver. KS has an eight-hole guide which adjusts instantly, perfectly to fit any pencil of popular size. KS cuts a perfect point—and then stops cutting no matter how much you turn the handle. KS, like all Bostons, features the exclusive 15 cutting edges which give you 25% more service.

C. Howard Hunt Pen Co., Camden, N. J.

**BOSTON**  
PENCIL SHARPENERS



**FULL SPEED AHEAD**



with —

**ORANGE CORE**

**Sealing Tape**

**"AMERICA'S MOST POPULAR BRAND"**

Moore & Thompson • Div. Hudson Pulp and Paper Co., 220 E. 42nd St., N. Y. C.



**"YOU BET I WORK ON A DAYTON LADDER IT'S SAFER"**



Safe, roomy platforms allow for tools and supplies.

Standard non-skid safety shoes at no extra cost!

**Use Dayton Safety Ladders —**  
Men work faster, safer, on the broad, firm platforms of Dayton Safety Ladders.

Ladder jobs shortened; extra men required to steady ordinary ladders are eliminated. Each piece of material thoroughly tested. Dayton Safety Ladders, made of tested airplane spruce, combine GREAT STRENGTH with LIGHTNESS of weight.

Write For Catalogue Today.

*The*  
**DAYTON**  
Safety Ladder  
*Co.*

121-123 West Third St.  
Cincinnati, Ohio

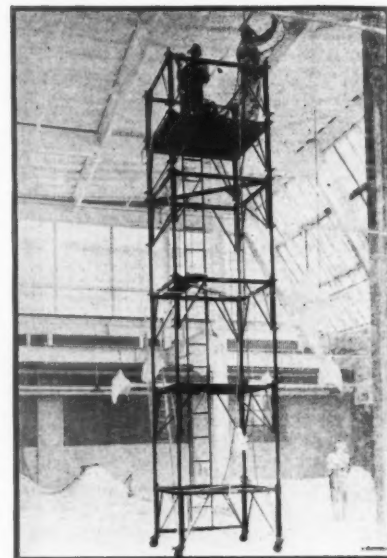
*As Safe as Standing on the Floor*

## STEEL SCAFFOLD

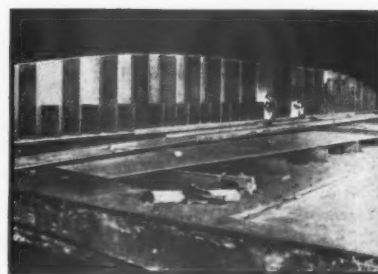
■ A safety scaffold for use by building contractors, electricians, painters, decorators, maintenance departments of private and public buildings, etc., has been placed on the market by Mechanical Handling systems, Inc., Detroit, Mich.

Designed on simple, gravity-locking principles, the scaffold provides extreme interchangeability with a minimum number of separate units. No screws, bolts, or clamps are used, and no tools of any kind are required to erect or dis-assemble the scaffold. The complete scaffold is erected from simple units as easily as an "erector" toy is put together and with the same versatility.

The scaffold consists of square-section tubular steel brace and corner post units, of extremely rigid construction with electrically welded parts, so designed that the scaffold may be erected quickly; and the unique design of the various units permits erection in straight line, in corners, around rectangular or circular constructions, either "inside" or "outside." Bridging over obstructions is easily accomplished with simple truss units.



## CRANE GIRDER



■ The giant all-welded girder for overhead traveling crane at the Cleveland Crane & Engineering Company, Wickliffe, struction. When completed this will be the world's largest all-welded crane girder.

Plates ranging in thickness from 7/16 inch to 1 1/4 inch are

being welded into position. This girder will weight 45 tons, have a span of 105'-0" and be over 8'-0" high at middle. It will be stronger and more rigid for its weight than possible by any other method of construction.

## NEW NESTING TYPE TOTE PANS



**Lots of**  
**50**  
**\$1.00 each**

20" long x 12" wide x 6 1/4" deep  
16 gauge steel, drag holes and handles both ends.

Other sizes and types available. Write for circular.

**J. L. LUCAS & SON, INC.**

5 Fox Street

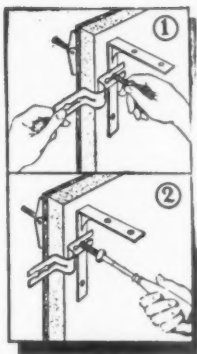
Bridgeport, Conn.

### TOGGLE BOLT CLAMP

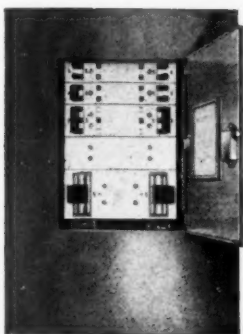
■ A remarkable toggle bolt clamp has been developed in the research laboratory of The Paine Company, Chicago, Illinois, that promises to revolutionize the installation of all toggle bolts up to and including  $\frac{1}{4}$ " diam. It is a small, handy gadget that can be carried in the vest pocket—yet it saves hours of time and effort and takes all of the headaches out of this installation.

It is made of a high quality spring steel, with die-sunk recesses on opposite sides of the slots providing a positive female threading action. You simply follow the ordinary installation procedure and when toggle bolt is ready to be tightened—you pull toggle tight against inside of wall, floor or ceiling—slip clamp over bolt thread flush against bracket or fixture to be anchored, as shown in Fig. 1, and screw bolt tight with screw driver, as shown in Fig. 2, then remove clamp and give bolt one more turn. Thus, it eliminates the old laborious method of having to pull out on toggle bolt while tightening it up—leaving both hands free for use of screw driver.

One of these clamps will be mailed to you free. When writing give the name of your toggle bolt supplier.



### MULTI-BREAKER PANEL



■ A line of "MH" Multi-Breaker power panels, which are the first to provide circuit breaker protection for power and light distribution at a price comparable with fuse equipment have been announced by The Trumbull Electric Mfg. Company, Plainville, Conn. The cost is remarkably low for this kind of automatic protection.

They are dead front with 15-100 ampere capacity common trip branch breakers—115v-230v a.c. single phase and 3-phase, suitable for use on underground systems.

Boxes are standardized and can be obtained from stock . . . they are uniformly  $5\frac{3}{4}$ " deep. Multi-breaker units are interchangeable and can be arranged in many combinations.

# KRON

## Dial Scales

FOR INDUSTRY'S EVERY NEED

THE KRON CO.  
BRIDGEPORT CONN.

## LINK-BELT SAFETY COLLARS

HAVE MANY DISTINCTIVE FEATURES

### Malleable Iron Types

Solid or split—strong, durable, light in weight, occupy little space, resist rust and corrosion, easy to install. Bores are machined and accurately faced on both sides. Can be driven on or off the shaft without breaking or chipping. Set screws are well protected for safety.

### Solid Steel Type

Machine-finished all over and cadmium plated. Corners are smooth and flangeless—outer edges rounded for safety—set screws tighten below the surface—bores are chamfered for ease of installation. Especially well suited where limited space is available on and around shaft, or where corrosion resistance and appearance are important. Neatly packaged.

### LINK-BELT COMPANY

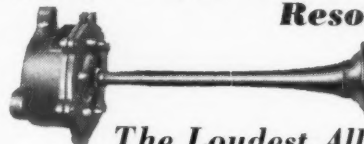
Chicago, Indianapolis, Atlanta, Philadelphia, Dallas, Toronto, San Francisco.  
Offices, warehouses and distributors located in principal cities.



A TYPE FOR EVERY SERVICE

## CUT THROUGH SHOP NOISE

with This New **FEDERAL**  
Resonating Horn!



The Loudest All Electric Horn

● Signals will be clearly heard above industrial noise when you install **FEDERAL** Resonating Horns. They are ideal for shops, yards, mills, mines, etc.; for use on cranes, conveyors, handling equipment, drawbridges and ships.

These electrically operated Resonating Horns are designed for fast code call systems; as warning signals; for fire alarm service; or, wherever a powerful distinctive signal is needed.

**FREE  
DEMONSTRATION!**

Write today for particulars and bulletin.

**FEDERAL ELECTRIC CO., INC.**

"SIREN HEADQUARTERS"

8737 So. State St.

Chicago, Ill.

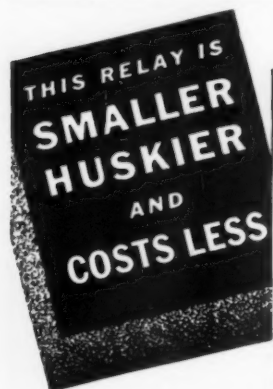
When writing advertisers please mention Purchasing



### "PULL-TAB" OPENER for ECONOMY

In every roll of SAFETEX gummed tape, regardless of width or basis weight, there is a "PULL-TAB" under the first layer of paper. By means of this PULL-TAB fresh rolls may be opened without wasting more than three inches of tape and with no loss of time whatever. *Sold by distributors everywhere.*

## CENTRAL PAPER CO. MENASHA, WIS.



The design of the new Ward Leonard Little Giant Single Pole Relay is simplicity itself. It is sturdily built, yet there is not an ounce of material in it that is not essential to efficient performance. Measures only  $1\frac{1}{8}$ " x  $2\frac{5}{8}$ ". Controls  $\frac{3}{4}$  H.P. on 115-230 volts. Ideal for heaters, pumps, compressors, signal lights, etc. Described in Bulletin 105.

Send for bulletins of interest

#### Relay Bulletins

Little Giant Relays Bulletin 105	Heavy Duty Relays Bulletin 131 & 132
Midget Relays " 106	Sensitive Relays ... Bulletin 251
Intermediate Duty Relays " 81	Time Delay Relays Bulletin 351 & 362

**WARD LEONARD**  
ELECTRIC COMPANY  
50 South Street Mount Vernon, N. Y.  
ELECTRIC CONTROL DEVICES SINCE 1892

*When writing advertisers please mention Purchasing*

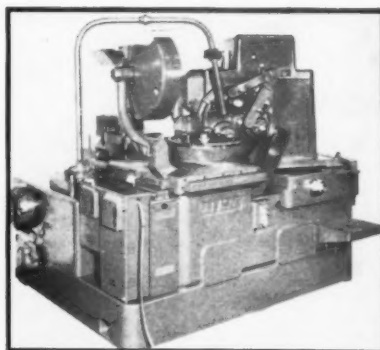
### EIGHT OUNCE FREQUENCY METER

■ A vibration frequency meter, weighing only eight ounces, and designed to aid the engineer in ferreting out the causes and cures of troublesome machine vibrations, is announced by the Westinghouse Electric & Manufacturing Company, East Pittsburgh, Pa. The instrument is no larger than an engineer's slide rule, but it can indicate what frequencies between 500 and 20,000 cycles per minute are present in a vibrating body.

This compact device is built around the principle of the vibrating-reed and consists of a thin spring steel vibrator clamped at one end between a set of steel rollers. A knurled knob connected to the rollers permits their rotation, and moves the steel reed in or out, changing its frequency of vibration. A sliding pointer on the back end of the steel reed indicates the vibrating frequency which is read off the calibrated scale on the frame of the instrument.



### CUTTING MACHINE



■ A mass-production machine for cutting straight bevel gears, such as those used in automotive differentials, washing machines and textile machinery, has been announced by the Gleason Works, Rochester, N. Y.

Entirely new both in principle and design, this machine provides the fastest method of cutting straight bevel gears.

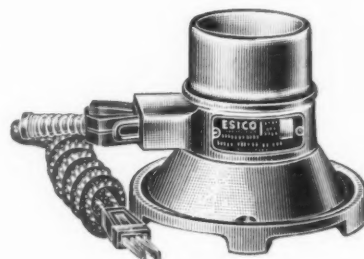
Gear teeth are both roughed and finished in one operation with a single disc cutter.

While normally arranged for the continuous production of one particular gear or pinion, it can also be arranged to handle several jobs, consecutively where quantities of each processed at one time are sufficient to warrant doing so.

### SOLDER POTS

■ These solder pots have been designed with the requirements of production establishments uppermost in mind. They are ruggedly constructed and are not top heavy. They may be screwed to benches where there is a possibility of their being hit or jarred.

Special feature is a pilot light which indicates when the pot is heating. Should something happen to the element or should the supply circuit fail, the light right in front of the operator will go out. That is the time for the production man to know of the failure, not when the solder is cold. Elements are easily and quickly replaced. Available in 115 and 230 volts. Made by Electric Soldering Iron Co., Inc., Deep River, Conn.





## No "WEEK-END BLACKOUTS" at Warren



ARISTOLOY  
STEELS

Conscious of our responsibility to our customers, and conscious of the importance of speed and quantity, as well as quality, we're doing our utmost to keep abreast of the demand for Aristoloy Steels by working twenty-four hours every day and seven days every week . . . and we are cheerfully adding new plant capacity just as fast as the necessary equipment can be obtained. There are no week-end blackouts at Warren—nor will there be any until the job is completed.

**COPPERWELD STEEL CO., WARREN, OHIO**

**ARISTOLOY**

S.A.E. ALLOY BILLETS AND BARS; OXIDATION AND CORROSION  
RESISTING STEELS; TOOL AND SPECIAL STEELS; AIRCRAFT QUALITY STEELS; STAINLESS STEELS

*When writing Copperweld Steel Co. please mention Purchasing*



on

## FLUORESCENT LIGHTING

from

**Well Established  
Manufacturer with**

- **Low Cost Volume  
Production**
- **66 Models to  
Choose from**
- **Direct Sales to  
Large Users**
- **Prompt Deliveries**

• • •

*Write for Catalog*

**W. H. LONG COMPANY**

435 NORTH CLARK STREET  
CHICAGO



LIGHTING ENGINEERS  
MANUFACTURERS  
EST. 1911

## F.O.B. *Philosophy of buying*

**T**HE Chicago Purchasing Agents Association this month celebrates the twenty-fifth anniversary of its organization. Back in 1916, a little group of seven men launched the enterprise which has meant much to purchasing, with a quarter of a century of useful service and consistent growth in membership and influence. The Chicago Association has contributed a large share of national leadership and outstanding committee work. Come May, it will be host for the third time to the national convention, standing alone in this distinction. We are particularly interested in noting among the seven men present at the first recorded meeting, in February, 1916, the name of B. P. (Bud) Mast, who today is party of the second part in the Conover-Mast organization, publishers of *PURCHASING*. Back in those days, Bud was assistant to Harold P. Gould, Editor of *100% Magazine*, spark-plug and first secretary-treasurer of the Chicago P. A. group at its inception. Incidentally, publication men have played a very important part in getting this association under way. E. B. Hendricks of *Thomas Register*, whose name is perpetuated in the Hendricks Club of N.A.P.A. past officers, is generally credited with the idea of a national organization and served as the first secretary of N.A.P.A. The late L. F. Boffey of *PURCHASING*, who is memorialized in the Boffey Students Award, served as secretary in the formative years of the association and was the first recipient of the Shipman Medal, in 1931, for his outstanding and unselfish services to purchasing. Modestly, *PURCHASING* strives to carry on this tradition of leadership and service to the field to which its efforts have been dedicated since 1915.

• • •  
*Confer, Confide, Convene*

That's the slogan for the N.A.P.A. convention in Chicago, May 26th to 29th. It's the brain child of F. C. Bog-

gess, Johns-Manville Purchasing Agent at Waukegan. Mr. Boggess has a record of twenty years as an association member, and is a past president of the Chicago group. When it comes to association values, he speaks with authority. And a good slogan it is, too, says F.O.B., even though the office cynic opines that the whole thing sounds like a "con" game.

**W**HEN the 1940 Census revealed that Allen County, Indiana, had a population of 155,084, it automatically abolished the office of County Purchasing Agent, for Indiana law provides for purchasing officers only in counties of 100,000 to 150,000 population. There has been some consternation in Fort Wayne regarding that situation, for it has been rather difficult to see just how the extra 5,084 people reduced the need or lightened the responsibility of county purchasing. A solution has now been found, based on the sound premise that a Purchasing Agent by any other name (such as Deputy County Auditor, for example) will buy as well. Accordingly, a special session of the Allen County Council has reallocated the sum of \$3,450 from the 1941 purchasing department budget to pay the salaries of two special deputies in the auditor's department, and P. A. Frank H. Walker and his secretary, Julia Lemmert, have been formally given the status of Deputy Auditor by County Auditor John A. Brewer. Mr. Brewer observes that while there is nothing to prevent his using the two new deputies for other work in the auditor's office, they would continue to perform their county purchasing duties for the present. Meanwhile Representative Charles Z. Bond has introduced a bill in the Indiana General Assembly to legalize the office of Purchasing Agent in growing Allen County. If and when this measure becomes law, the County Council

*When writing W. H. Long Company please mention Purchasing*

proposes to reallocate the appropriation back to its original source, and the county buyers will resume the titles which are more properly descriptive of their services.

Reports from the Associations indicate a very general pick-up in attendance at association meetings, and a trend to more practical and timely purchasing topics. At one January meeting there were ninety minutes of questions from the floor following an address on priorities before the chairman's gavel terminated the session. This procurement is getting to be quite a job.

FROM time to time, over the years, students of purchasing and of marketing have solemnly analyzed the factors which motivate the buyer in his selection of goods and sources of supply. With no intent to belittle this earnest study or to discount the value of its conclusions, F.O.B., offers his own analysis of these factors in the 1941 market:

#### *Product Motives*

1. Availability
2. ditto
3. ditto
4. ditto
5. ditto

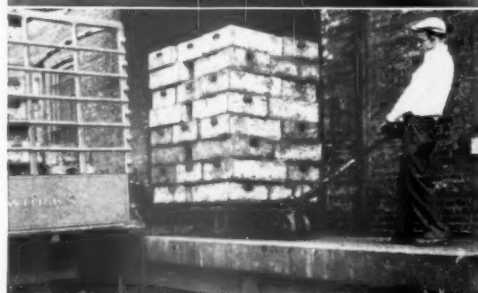
#### *Patronage Motives*

1. Supplier's ability to deliver the goods.
2. ditto
3. ditto
4. ditto
5. ditto

PURCHASING AGENTS generally are very much interested in the authenticity of statistics, and may find food for thought in a recent report concerning the great motion picture industry, which may be slightly more imaginative than most fields of business endeavor but is certainly very practical as well. As the story came to us, some highly impressive figures concerning cinema attendance throughout the country had emanated from the office of the Motion Picture Czar, with a credit line to the U. S. Department of Commerce. An enterprising investigator went to the Commerce Department for further information. Commerce officials freely acknowledged the statistics as their own, and as irrefutable proof of their accuracy, added: "We got them direct from Mr. Hays' office."

## BARRETT Lift Trucks

### better than Aspirin for Materials Handling Headaches!



Can your firm handle materials as fast as you can purchase and process them? Many firms can't. Others have broken this "bottleneck" by calling in the Barrett Materials Handling Engineer to get his recommendations on which of the Barrett Lift Trucks were needed to properly see things through.

Barretts have many exclusive construction, operating and safety features. They lift quicker, handle easier—less weight per ton capacity—last longer. Barrett Steepleg Platforms are available in a wide range of types for handling every type of material or product.

End those "M. H. Headaches"—write for free trial offer, Catalog 639, and name of your nearest Barrett Materials Handling Engineer.

Made in models from 1,000 to 15,000 lbs. capacity.



# BARRETT

BARRETT-CRAVENS COMPANY

3280 W. 30th Street • Chicago, Illinois  
Representatives Everywhere



When writing Barrett-Cravens Company please mention Purchasing



# APEX

## HAND DRIVERS



### Super and General Purpose

Super Drivers, for self-tapping screws, lower the tool cost per thousand screws driven, and stand up under severe usage. Blades are highly polished and handles are of highest quality hardwood with deep flutes.

### "Superloid" Drivers

These are available with the same blades as used on Super and General Purpose Drivers. Handles are made of transparent amber "Superloid" and are break-proof and shock-proof.

### Stubby Drivers

Designed especially for close quarters work, and furnished with Super blades or hard-faced Alloy blades. Natural finish wood handles deeply fluted. For sizes 1 and 2 Phillips screws only.

### Service Drive Bits



For all makes of assembly Tee handles, extension shanks, speeder handles, ratchets, etc., having  $\frac{1}{4}$ ",  $\frac{9}{32}$ ",  $\frac{3}{8}$ " or  $\frac{1}{2}$ " square drives.

### Hand Brace Bits



Hand Brace Bits for all sizes of Phillips screws with either Super or General Purpose blades. All sizes  $4\frac{1}{2}$ " in length.

### Offset or "L" Drivers



For service and miscellaneous assembly work with body diameters of  $\frac{9}{64}$ ",  $\frac{1}{4}$ ",  $\frac{5}{16}$ " and  $\frac{3}{8}$ "; offsets of 1",  $1\frac{1}{4}$ ",  $1\frac{1}{2}$ " and  $1\frac{3}{4}$ " respectively.

Send for Manual and Catalog No. 11. Phillips Lic. No. 2, Pats. Nos. 2046837-38-40.

**The  
APEX MACHINE  
& TOOL COMPANY  
Dayton, Ohio**

# PERSONALITIES

## in the NEWS

**H. Nedwill Ramsey** has been appointed Purchasing Agent of the Philadelphia Electric Company, succeeding R. G. Rinchliffe, who becomes manager of the company's station operating department. Mr. Ramsey is a mechanical engineer, graduating from the University of Pennsylvania in 1920. His service record includes seven years as engineer and assistant to the general superintendent of the American Gas Company, four years with U. G. I., three years in charge of real estate operations for the United Engineers and Constructors, Inc., and six years as president of the Welsbach Co.

**S. L. Gilliam** has been appointed Purchasing Agent of the Mid-Continent Petroleum Corp., Tulsa, succeeding Charles A. Prichard, who has resigned after twelve years in that position to join the operating department of the Anderson-Prichard Oil Corp., Oklahoma City. Mr. Gilliam has been with the company since 1915, and was Assistant Purchasing Agent prior to his present advancement. C. W. Wallace has been named first assistant to Mr. Gilliam, and J. R. Stockton and G. E. Knotts continue as Assistant Purchasing Agents.

**R. M. Nelson**, General Purchasing Agent of the Chesapeake & Ohio Lines, with headquarters at Cleveland, has completed fifty years of service with that company, the greater part of his record being in connection with purchasing activities. He was appointed General Purchasing Agent in 1939, and had previously served as Purchasing Agent and Assistant to the Director of Purchases and Stores.

**August Frey**, Purchasing Counsel to the Governor of Wisconsin, has been reappointed for a two-year term by Governor Heil. The duties of the office include passing upon state purchases and contracts that require the governor's approval.

**Lee S. Gaty** has resigned as Purchasing Agent for Franklin County, Ohio, effective March 15th. Harold C. Lloyd of Columbus will succeed Mr. Gaty in the office.

**Edgar Huot** has been appointed Chief Purchasing Agent for the Department of Public Works at Ottawa, Canada. He has been connected with the department for nearly forty years, in the Chief Engineer's Division.

**Major Edward Ostendorf**, Land Purchasing Agent for the U. S. Government in the Erie County TNT plant project, addressed the Kiwanis Club of Sandusky, Ohio, last month, outlining plans for the development.



**J. K. CONANT**

**John K. Conant** has resigned as Purchasing Agent of the General Printing Ink Corp., New York, to accept a position in the purchasing department of the Viscose Co., in Wilmington, Del. A Past President and National Director of the New York Association, and an active worker throughout his twelve years of membership, Mr. Conant was guest of honor at a testimonial dinner given by his associates in purchasing work, at the Engineers' Club, January 30th.

**H. W. Wagner**, City Purchasing Agent at Cincinnati, and Milton R. Maddux, Hamilton County (Ohio) Purchasing Agent, were among those testifying at a hearing of the Bituminous Coal Commission in Washington, January 10th, for a permanent exemption from payment of rail freight rates on coal shipped by river.

**Major Joseph L. Ernst**, Purchasing Agent of the Rochester (N. Y.) Board of Education, has been called to active military service. Robert L. Jeffries has been named acting Purchasing Agent.

**G. R. Rumbaugh** has been appointed State Purchasing Agent for Louisiana, succeeding Newt Ogden, who becomes director of occupational standards, a new department of the reorganized state government. For the past six years, Mr. Rumbaugh has been merchandising manager for the Sears Roebuck Co. at New Orleans.

**Wendell Lund**, secretary of the Michigan State Administrative Board, has assumed general supervision of the state purchasing department, pending the civil service examinations and certification of a new Purchasing Director.

**J. E. Henry** of Bozeman, Montana, has been appointed State Purchasing Agent, succeeding I. S. McQuitty.

*When writing The Apex Machine & Tool Company please mention purchasing*